THE MONTHLY FOR RESELLERS SEPTEMBER 1997 Vol.3 No.9

Canadian Computer Wholesaler

Computers For Students

Back-to-school buyers will groove on these low-cost, power-packed PCs!

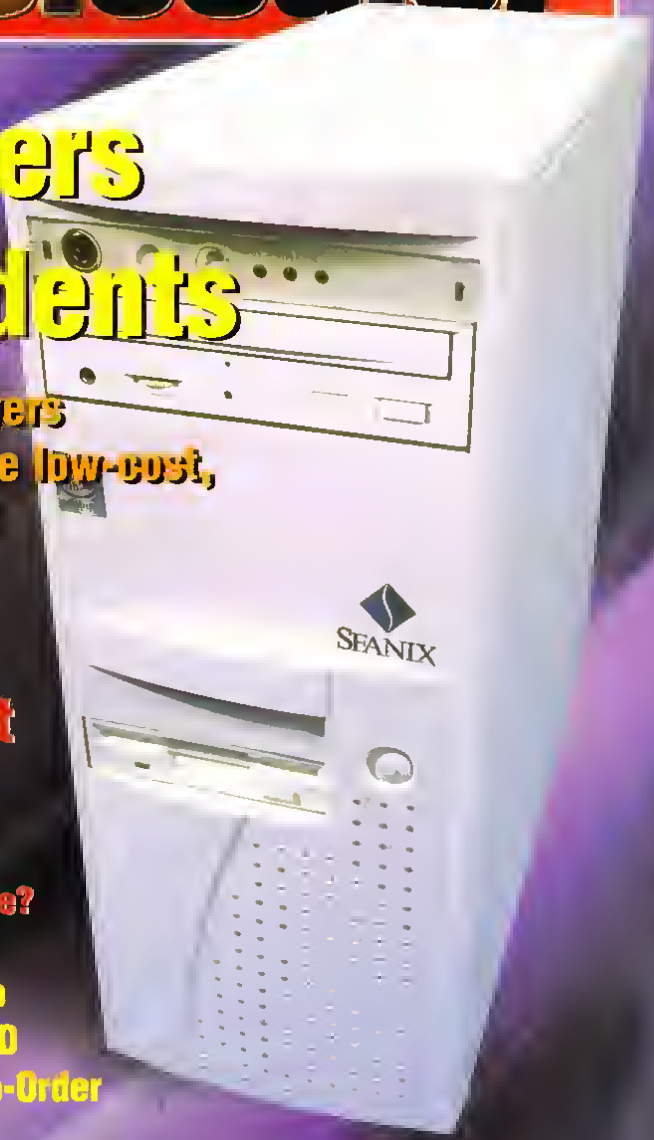
The Apple/Microsoft Affair:

A shotgun wedding or a marriage of convenience?

Sound Choices In Audio

Driving Demand For DVD

Understanding Build-To-Order



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WinBench 97	*Business WinMark*	584	587	557	535
4096 bytes	*Random Reads*	466	447	371	358
4096 bytes	*Sequential Reads*	5450	3410	4290	4480
4096 bytes	*Random Writes*	575	676	546	516
4096 bytes	*Sequential Writes*	6090	5130	6040	4730
CoreTest	*Performance Index*	57.29	57.07	55.42	56.48

SOURCE: JTS System Engineering Code FADD16A
System: Compaq Deskpro, Triton Chipset, Intel Pentium 200 MHz, 256K Cache, 16 MB RAM

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The Apple of Gates' eye?

Whether it was a shotgun wedding, a marriage of convenience or the result of long-standing flirtation, Apple Computer Inc and Microsoft Corp are now officially "an item."

The relationship has its well-wishers, its critics, and of course, its skeptics. Certainly at least a segment of the Macfaithful were bent out of shape as Apple takes a shine to what some fervently think of as the "evil empire." One Macintosh zealot told me he and his friends wore black armbands the day after the announcement.

Of course, Apple has always been able to inspire a nearly religious devotion among a portion of its user base. Oracle CEO Larry Ellison (noteworthy, in this instance for his active dislike of Bill Gates), is a new member of the board of directors at Apple. He too is struck by the enthusiasm of Apple's user-base. He said: "Apple's the only lifestyle brand in the computer industry. It's the only company that people feel passionate about. My company Oracle is a huge company, IBM's a huge company, Microsoft is a huge company, but no one has incredible emotions associates with our companies."

(An aside: there is perhaps an argument that a subset of 3Com PalmPilot users are approaching a Mac-like enthusiasm.)

Indeed, although the Macheads cheered and applauded the entry of Apple co-founder and interim leader Steve Jobs on stage, they ardently booed the appearance of Bill Gates on the overhead screen at Macworld Expo in Boston, as Jobs announced the new agreement that will see, for example, co-licensing of technologies between Apple and Microsoft, a US$150 million cash infusion by Microsoft, a commitment by Microsoft to develop Office for the Macintosh for the next five years, and the installation of Internet Explorer the default on every Macintosh computer. For more on that announcement, and what's going on over at Apple, please check out Jeff Evan's *"Apple Gets Cozy With Microsoft In New Deal"* on page 16, and Graeme Bennett's *'Apple As A Metaphor,"* page 20.

And be sure to peruse Doug Alder's report, *"The Event Of The Century?"* page 62, direct from Macworld Expo.

The concerns surrounding the Apple/Microsoft agreement are varied. Some users worry that Microsoft's influence may negatively impact the creativity for which Apple is known. Others worry that if Microsoft has free access to Apple's developments, it could make the Macintosh platform less unique in the market-place. Still others mourn yet-another-blow to Netscape Corp as virtually every desktop computer sold will already have a Web browser loaded on it.

Yet other industry watchers are cheered by the announcement. The sheer marketing sway of having the mammoth player of the industry — Microsoft, on one's side, does indeed carry weight, assurances of stability and a sense of credibility to the business community at large. And for a company like Apple, with only seven per cent market-share and shrinking revenues, such market messages are of incredible value.

This is of course not the first time Apple has teamed up with a major PC-oriented vendor. Don't forget the Apple/IBM/Motorola alliance that was launched in 1991. That announcement made huge headlines as the general media proclaimed the coming together of two computing solitudes. Back then, pundits predicted the alliance would eventually bring together the PC and the Mac into one unified platform.

Certainly the PowerPC processor has been an important technology, especially for Apple. The Taligent operating system and Kaleida multimedia initiatives were considerably less noteworthy.

And despite the hopes and fears voiced at that time, the PC and the Mac platforms still haven't merged, and Apple and IBM are certainly still separate companies.

In the big scheme of things, it will not be Microsoft that will save Apple.

As something of the underdog in the industry, Apple has historically responded with creativity and innovation. Regardless of this latest version of 'coopertition,' Apple will only see success if it emerges with strong leadership and direction. And, the company must dig deep down for its roots and provide (and skillfully market!) truly innovative, intensely usable products — a just reward for the Mac faithful. CCW

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More Information on Velo?

After reading (an article on handhelds in) *Canadian Computer Wholesaler*, I am more confused than ever. I need a handheld and so went surfing on Philip's site but found no price tags.

How does it compare to the 2MB Cassiopeia (not only price, but performance)?

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gin@total.net

Editor's Note: Buried in the depths of FAQs on Philips's Web site (http://www.velo1.com/velo/), is that information that the Velo 1 4MB unit has a street price of US$599.99, and the Velo 1 8MB system with rechargeable batteries has a street price of US$839.99.

The Velo has done very well in product reviews. It has a built-in modem, which doesn't run the battery down in five minutes. It has voice recording as well. The most significant competition seems to be coming from the new Hewlett-Packard version of the HPC, with a wide, back-lit screen.

On-line subscriptions?

On the outside of a recent issue of *Canadian Computer Wholesaler* magazine was a renewal notice. Just a suggestion, if you have a Web page, let people renew on-line. You may get a better return on subscriptions.

The magazine is good, I used it to buy my Acer 18X CD-ROM. Thanks for being there.

Douglas Ross
Consultant
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Editor's Note: Our apologies for not including notification of our Web site subscription renewal option on our renewal notice. Readers can renew their subscriptions at our Web site, at http://www.ccwmag.com.

Bill Gates will own the 'Net

With a bit more speed for audio and video files, the Internet will end up being just like television, and people will have a few million channels to choose from — and somehow Bill Gates will own it.

I just picked up this magazine — and I like it much better than any of the American glossy magazines. Great design overall.

Sanj Arora
Toronto

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Windows 98 — it's official

At the recent Windows Platform Briefing in Seattle, Paul Maritz, the group vice-president of Microsoft platforms and applications officially confirmed that the name of the next version of the MS Windows 95 operating system will be Windows 98 — expected to ship sometime in 1998. Until now, the new version of the operating system had been referred to by its code name, "Memphis."

Windows 98 is currently in an advanced beta test version. It is expected to offer a high degree of backwards compatibility with existing Windows applications, plus many new features, such as improved hard drive performance with the aid of a new Disk Defragmentation Wizard, and tools such as a system file checker, to monitor system changes and restore the system in case of file problems. Other features include enhanced Universal Serial Bus (USB), multi-monitor, and dual modem support.

Microsoft also announced its initiative to reduce the cost of moving to the next version of Microsoft Office, and to lower its administration costs. Microsoft claimed that these efforts would reduce the total cost of ownership (TCO) by 50 per cent. Some of the new capabilities aimed at increasing the efficiency of future versions of MS Office include Installation-on-Demand, for optimizing Office installations, and Self-Repairing Applications, to let users replace missing system files even if an end-user has deleted them.

As well, Microsoft outlined a strategy of 'Continuous Reinvention' for Windows, a process of incremental improvement in every facet of the Windows operating system, from file systems to drivers. According to Maritz, "The secret of the PC phenomenon has been that Windows has enabled unprecedented software and hardware innovation on the part of the entire PC industry. This process of reinvention will enable Windows to be the common link for an increasing number and variety of computing devices ranging from mainframe class systems, small-business servers, terminals and networked PCs to entertainment and consumer electronic devices."

Quantum announces record sales and earnings

Quantum Corp., a manufacturer of PC hard drives, announced sales in the first quarter of fiscal 1998 of US$1.45 billion, up 26 per cent from sales in the quarter one year previously, and net income of $96.5 million, compared to $3.8 million in the quarter a year previously.

According to Michael Brown, Quantum's CEO, the improved profitability was mainly due to strong DLT tape sales, while unit shipments of hard drives were considerably increased. "Our DLT technology has become a preferred solution for back-up and archival storage requirements for mid-range servers based on its advantages in terms of capacity, performance, and reliability relative to competing technologies. At 18 per cent of our sales for the quarter and a much higher percentage of our operating profits, our DLT tape products provide an important element of diversification for our overall business."

Contact: The Editor

LETTERS

Canadian Computer Wholesaler welcomes your opinions on current issues in the market, plus your feedback on our publication.

NEWS

We welcome your ideas regarding news and feature topics for *Canadian Computer Wholesaler*. Feel free to contact the editors directly with your suggestions.

TEST LABS

We'd like to hear your feedback and suggestions on our Test Labs reviews section.

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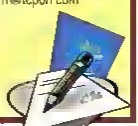

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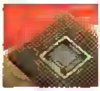
Intel will buy Chips and Technologies



Intel Corp has entered into a definitive agreement to acquire Chips and Technologies Inc , a maker of graphics accelerator chips, based in San Jose, Calif

Intel says Chips and Technologies will become a wholly owned Intel subsidiary

"Intel's acquisition of Chips and Technologies will provide us with the ability to bring strong graphics solutions to the mobile market segment," said Craig Barrett, Intel's president and chief operating officer, in a statement

Merisel Inc. has reported quarterly profits

Merisel Inc has achieved its third consecutive quarter of profitability for the period ended June 30 The company reported consolidated net income of US$2 05 million, or US$ 07 per share, on sales of US$895 75 million for the second quarter of 1997, compared with a net loss of US$11 4 million on sales of US$1 44 billion for the second quarter, 1996

The figures included Merisel's ongoing distribution businesses in the U S and Canada The company reported sales were particularly strong in Canada

Merisel Inc is currently examining a debt restructuring proposal

Microsoft buys VXtreme; intros new NetShow

(NB) — Microsoft Corp has bought video streaming technology company Vxtreme Inc for an undisclosed amount

The software giant also released the newest version of its NetShow streaming media server that brings audio and video to a user's desktop

The NetShow 2 0 client is available for downloading for the Windows 95, Windows NT, Windows 3 1 and Unix operating systems, and will soon be available for the Macintosh

Microsoft's Web site is at http //www microsoft.com.

Intel and SAP create Pandesic for e-commerce

(NB) — Intel Corp and SAP America Inc of Walldorf, Germany, have formed Pandesic LLC to develop integrated e-commerce/e-business systems.

The 50 50 partnership, headquartered in Sunnyvale, Calif , with 50 employees, will offer a custom hardware/software system based on a single server, connecting customers, merchants, warehouses, and manufacturers.

Intel's Harold Hughes a veteran executive with the chipmaker, is chairman of Pandesic, and Brian Plug, an SAP vice-president, is now president and chief executive officer of Pandesic.

Intel and SAP are targeting small, medium, and *Fortune* 1000 companies Beginning costs of a system are in the range of "double digit thousand dollars "

Visual computing: The new hot market?

The message of the recent 1997 Siggraph convention in Los Angeles, was that the future of computing is graphics. Not just for Hollywood special effects professionals or computer gamers, but for the mainstream SOHO and business markets, and especially for computer manufacturers and resellers

Siggraph stands for Special Interest Group (Graphics), a branch of the Association for Computing Machinery (ACM) At the show this year Windows-based systems for less than $10,000 seemed to outnumber the traditional Silicon Graphics, Sun and Digital workstations and supercomputers. Digital, in particular, seemed to have decided to adapt to the influx of PC technology into the 3D animation and graphics market by offering products that straddle the line between desktop PCs and workstations

Digital has found that graphics is the trump card that has let it thrive in the high-end PC, personal workstation and server markets.

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Ontario business info system goes on World Wide Web

(NB) — OnCorp Direct Inc said it will offer the Ontario Business Information System (ONBIS) on the Web or through dial-up connections

Under contract with the province's Ministry of Consumer and Commercial Relations, OnCorp will offer searching of corporate and business names, and access to reports and certificates that in the past could only be obtained from ministry offices

The Web site is at http://www.oncorp.com

Canada has plans to eliminate software tax shelter

(NB) — Canadian minister of finance Paul Martin and minister of national revenue Herb Dhaliwal have proposed a change to income tax regulations that would do away with a tax shelter for investments in computer software development

The change would mean that capital cost allowance deductions for computer software, if not already subject to leasing property rules, would be deductible only up to the amount of income earned by the business in which the software is used. This would essentially stop investors from saving taxes by investing their money in unprofitable software development projects to get tax losses.

According to government officials the change would impose the same restrictions on tax write-offs for software not developed to earn lease, rent, or royalty income as already apply to software under the leasing property rules.

In the past, investors have been able to obtain sizeable tax write-offs in a couple of years by investing in software development projects, sometimes deferring payment of a large part of the investment until later. Meanwhile, while these ventures were required to have a "reasonable expectation of profit," tax officials were concerned that in some cases there was no real intent to make profits on the sale or use of the software. The new rules will eliminate that concern by requiring that the operation be profitable before any tax deductions can be taken, said an official at the finance ministry who asked not to be identified.

A background document issued by the government said the revenue ministry has found numerous cases where software tax shelters were breaking existing rules, and has reassessed tax returns to the tune of more than $20 million. The new rules will reduce disputes and protect potential investors from being sold tax-shelter schemes that turn out to be ineligible under the law, government officials claimed.

The change is likely to provoke concern among software developers, however. The tax rules on software investments were created to help address the difficulty software developers have said they face in obtaining financing to develop a largely intangible asset which the financial industry has not always understood well.

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Supercom distributes O.R. Technology drive

Markham, Ont.-based Supercom has added O.R. Technology's a.drive to its product line.

Supercom says the 120MB 3.5-inch floppy drive delivers 80 times the capacity, and five times the speed of standard 1.44MB drives. Meanwhile, it retains compatibility with 720KB and 1.44MB floppy disks. For more information, call (905) 415-1166.

Nevermind "Ma Bell" — do it yourself with Concero Switchboard product

One of the most common headaches for the one million small office/home office (SOHO) operators in Canada is the difficulty of managing the telephone connections into a SOHO site. The usual state of a home-based computer telephony setup is a jumble of wires, and a jury-rigged process for sending and receiving faxes, voice mail, E-mail, Web browsing, and family and office phone calls.

That situation may change permanently as a result of the release of a personal switchboard product for the SOHO market. Ottawa-based Centrepoint Technologies has launched its new Concero Switchboard, claimed to be "the most advanced and complete solution available to transform the small or home office into a powerful communications command centre."

According to Jan Scheeren, president of Centrepoint, "Today's SOHOs have to cope with an assortment of office gear that operates in a kind of electronic anarchy. Our Concero Switchboard brings computer telephony to the desktop as a real solution to these everyday communications snags."

The Concero Switchboard is essentially a tiny telephone exchange which can be connected to two incoming phone lines and routed to four extensions. It can function happily as a standalone device, or it can be controlled via a serial cable from your PC. The suggested list price is about $675. See http://www.ctrpoint.com or telephone (613) 725-2980.

PC purchasers get instant credit, on-line

Newcourt Credit Group, a division of Newcourt Financial, a large Canadian lending firm, has established a new computer leasing service. CreditLink, which is designed to make retail leasing of computers quick and painless for both buyers and resellers.

Once a reseller has been authorized to use the CreditLink system, filling in a leasing contract and making a credit authorization request is a matter of a few minutes. Credit information on any potential customer who has a Canadian bank account is processed through a secure credit clearing house, and authorization is determined on the spot. If the lease is approved, the client can leave with the PC, or as quickly as a custom configuration can be assembled. The monthly credit payments are deducted from the buyer's bank account, but of more significance to the reseller, full payment is made within a day or two of the customer receiving the product. According to Newcourt representatives, the interest charges on CreditLink leases are comparable to current credit card interest rates, but there are no credit card charges to the retailer.

Newcourt claims that more than 700 computer resellers are currently making use of the system, and Dell Computers has adopted CreditLink to use in conjunction with its direct sales program. Newcourt claims that CreditLink gives Canadian resellers of all sizes a competitive advantage by making leasing a painless, competitively priced option, facilitating quick sales for both resellers and end-users. For more information, contact http://credling.newcourt.ca.

Motorola supplies modems to Empac

Empac [illegible] with Casey Witkowicz, [illegible] vice president, Motorola transmission products division.

Canadian-owned Empac Computer Corp. is now shipping computers that incorporate Motorola 56Kbps SURFR Series modems, thanks to an agreement with Motorola's Information Systems Group, transmission products division.

In a statement, Empac president John Pang said customers are demanding faster speed modems. Moreover, he said Motorola and Empac would be offering joint promotions over coming months to Empac's 3,500 active reseller partners.

Maximizer launches Tracker Software

(NB) — Vancouver's Maximizer Technologies Inc. has introduced Tracker 97, an update of the contact management software the company acquired in early June from Tracker Software Australia Pty. Ltd.

Sold only outside North America, the new release incorporates a variety of features including a new desktop interface borrowed from the vendor's other contact-management package, Maximizer.

Tracker users in North America, where the package does not have a large installed base, will be offered an upgrade to Maximizer 97, which company spokesperson Jacqueline Parker said is "basically the same package" with a few different features.

The new desktop has something of the look and feel of a World Wide Web browser, allowing users to click on areas to enlarge them or bring out further information, said Parker. Other new features include wizards for various common tasks, multitasking abilities such as list processing in background, wildcards in searches, and group scheduling.

The software's communications capabilities include the ability to launch a 32-bit E-mail package — provided it complies with either the Vendor-Independent Messaging (VIM) or the Messaging Application Programming Interface (MAPI) standard — from within Tracker to send E-mail to contacts as well as receiving incoming mail and attaching it to the appropriate contacts.

The list price of Tracker 97 is US$150.

Mitel Corp. buys Gandalf's product lines

(NB) — At least some of Gandalf Technologies Inc. will be saved. Mitel Corp. has announced that it will buy the struggling communications equipment maker's technology and products, though not its service business. Both companies are based in Ottawa.

Gandalf filed for protection from its creditors late in July after attempts to find a buyer or major investor fell through and the company ran out of money. Prospects had begun to look grim for the firm to sell off even parts of its operations.

The deal with Mitel, which will pay US$14.9 million in cash for all of Gandalf's products including its remote-access business, is likely to save the jobs of 60 to 100 employees. Kirk Mandy, vice-president of business communications and semiconductor business at Mitel, said his company will need design engineers and other staff from Gandalf to keep up the product line.

Numbers are indefinite as Mitel is "still kind of working our way through it," he said, but a number of current Gandalf employees are likely to get job offers from Mitel.

Canada-U.S. ATM service is available

For businesses with operations in both the U.S. and Canada, the issue of providing high speed network links across the border has been a source of either expense or frustration, due to the shortage of publicly available high-bandwidth international commercial telecom services. On Aug. 11, Bell Canada and America's MCI announced an alliance to provide cross-border ATM (Asynchronous Transfer Mode) service. This speed range makes applications such as telemedicine, 3D imaging and CAD-CAM more feasible. CCW

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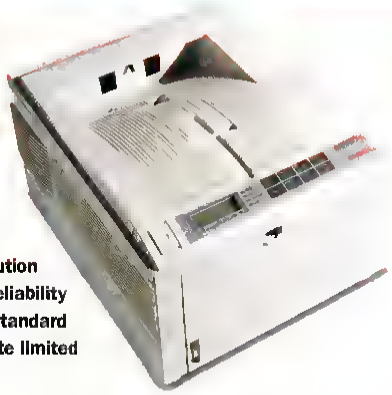

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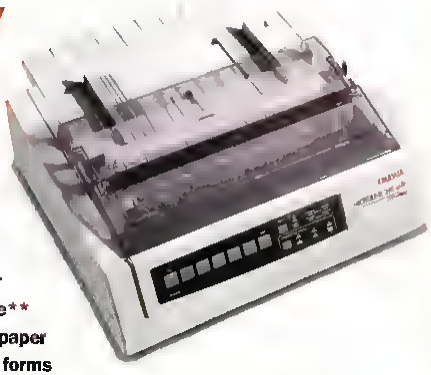

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Column

Apple Gets Cozy With Microsoft, In New Deal

by Jeff Evans

On Aug. 6, Steve Jobs, acting leader of troubled Apple Computer Inc., announced a major partnership with Microsoft that rocked the Apple faithful and delighted Wall Street, at least temporarily. At an address to a packed hall in Boston, Jobs informed the audience of a string of major initiatives to get Apple back on track following the sudden departure of Apple's most recent CEO, Gilbert Amelio.

A new slate of Apple board members, including Oracle founder Larry Ellison and Jobs himself was unveiled. Then, in a move that seemed to ironically echo Apple's famous '1984' commercial, (where the Apple Macintosh was launched as a counter to Big Brother's IBM PC), the giant video screen behind Jobs lit up with the image of an apparently amused Bill Gates, often regarded by Mac boosters as the modern Big Brother. As Gates smiled benignly, Jobs outlined a recently negotiated, complex deal between Apple and Microsoft. First, Microsoft will invest US$150 million in Apple, buying newly created, non-voting shares in the company. Second, Microsoft and Apple will agree to cross-license their technologies to each other, to spur faster software development and greater compatibility. Apple will abandon its remaining legal challenges against Microsoft on grounds of copyright violation, and Microsoft will make an undisclosed number of royalty payments to Apple. Apple will promote the Microsoft Internet Explorer Web browser as the browser of choice for Mac users.

The deal resulted in an immediate 30 per cent jump in the value of Apple stock, and was viewed as a coup for Jobs, who had personally prevailed on Apple's insular management culture to do a deal with the devil. Apple gained a much-needed dose of credibility from Microsoft's support, and it will be up to Jobs and whoever becomes the new Apple CEO to move quickly to add substance to Apple's claim that it is reinventing itself for long-term success.

For Microsoft, the deal brings a host of immediate and potential advantages. Microsoft has a stake in seeing Apple survive and prosper. If Apple were to disappear, Microsoft would almost certainly face serious anti-trust attack on the basis of its having a monopoly on PC operating systems. Apple's abandoning of its lawsuit against Microsoft also clears an annoying potential time bomb off Gates' plate.

The Internet Explorer deal strikes a big blow against Web browser arch-rival Netscape Navigator. And, finally, since Microsoft is the largest publisher of Mac software, its expression of confidence in the Mac helps protect a major market for Microsoft software.

Apple needed this deal more than Microsoft did, and the lopsided advantages for Gates' company reflect the imbalance in power between the two companies. Jobs' position in this alliance is ambiguous due to his complex history with both Apple and Microsoft. Jobs experienced great anger and pain when he was bounced out of Apple in the mid-'80s, and his return to the company has been a bittersweet decision.

In a way, this alliance is a return to both Apple's and Microsoft's roots. Gates and Jobs, in the early days of both their companies, were close allies. Microsoft was one of Apple's earliest and most enthusiastic software development partners. Gates saw the Mac approach to computing as the model for the industry, but unlike Apple, he saw an opportunity for bringing a windows based user interface to the IBM PC compatible platform.

The new alliance doesn't solve Apple's basic problems, by any means. To truly recover from its ongoing slump, Apple needs a vision which will direct the speedy development of market-leading products, and which will also retain the confidence of Mac dealers, users, and third party developers. With Jobs continuing to insist that he isn't in the running to be the new Apple CEO, the hunt is on for an executive who combines the virtues of Superman, Thomas Edison an PT. Barnum.

Jobs and Gates: pals again

There is such a man, but, alas for Apple, Bill Gates already has a job. CCW

Jeff Evans is Associate Editor of Canadian Computer Wholesaler. He can be reached at jeff@tcpan.com

Mac OS 8 — 1.2 million copies sold in two weeks

(NB) — Apple Computer Inc. says its new operating system — Mac OS 8, is selling four times faster the expected. In the two weeks following its July 26 debut, more than 1.2 million $99 copies of the Macintosh operating system were sold, causing an "out-of stock" situation in many locations.

At a debut for what Apple calls the most significant OS upgrade since the introduction of the Macintosh. Apple officials refused to provide numbers or estimated revenues for short or long-term sales of Mac OS 8.

Apple also claimed the demand for Mac OS 8 affected hardware sales. According to reports, dealers in certain locations reported a more than 30 per cent increase in Apple computer systems over the introductory weekend.

Designed for Macintosh and Macintosh clones with 68040 or PowerPC microprocessors, Mac OS 8 features multi-threading, PowerPC processor native Finder, spring-loaded folders, pop up windows, contextual menus, an Internet Set Up Assistant, and "push" technologies including the PointCast Network and Marimba's Castanet Tuner. Built-in Java features allow users to keep Java applets on their desktop, and PowerPC users of the new OS can use the integrated Motion Picture Experts Group (MPEG) capability.

At least 12MB of physical RAM is required to run Mac OS 8. Systems with less than 20MB of physical RAM must have virtual memory turned on and set to at least 20MB. More information is available at http://www.apple.com. CCW

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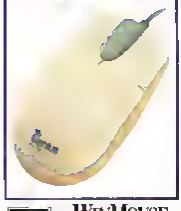

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Apple As A Metaphor

by Graeme Bennett

I love a good metaphor

Whether you think Apple's recent pact with Microsoft is just delaying the inevitable or the beginning of a turnaround for the troubled company — it is clear that Apple is in difficulty, and needs to take some dramatic steps to correct its course. This of course, was the theme of the keynote speech by Apple co-founder and leader-by-proxy Steve Jobs at the Macworld Expo in Boston, where all the Apple/Microsoft plans were unveiled.

Try mentally replacing all references in this article to Apple and Macintosh with your own company and product(s), to examine some of the issues that every business has to stay focused on. Apple lost sight of some important ideals, now it is paying the price.

Consider this quote from Steve Jobs who, for better or worse, is regarded as a man of considerable vision by supporters and detractors alike: *"We have to let go of this notion that, for Apple to win, Microsoft has to lose. We have to embrace the notion that, for Apple to win, Apple has to do a really good job."*

Points to consider:

Elegant solutions breed customer loyalty.

Generally speaking, Mac OS-based systems haven't been faster than their Intel- or Unix-based cousins, nor more technically sophisticated. Why are Mac users so devoted? The short answer is "because it works — elegantly." Best of all, Mac users have historically demonstrated a remarkable willingness to pay extra for that perceived elegance. Easier has long been the keyword for the Mac experience, but it is now a Microsoft mantra as well.

Capitalize on trends.

Apple didn't invent the WIMP (windows/icons/mouse/pointer) interface, nor did it invent the PostScript language that drove the first LaserWriter. But Apple, especially in those critical early days, saw emerging technology trends and quickly capitalized on them. As in most boom-times, the big money is made early on. If Apple hadn't been so mixed up over the last few years, it might have a more comprehensive Internet strategy in 1997.

Even as it is, the company claims 64 per cent of Web authors use Macintoshes. In his keynote, Jobs stated that 10 per cent of Mac sales are directly attributable to Adobe Photoshop.

Use the right tool for the task.

Macs handle some tasks better than Windows PCs, and vice versa. If your customers are coming in asking for Macs and you're spending effort trying to convert them to the PC religion (or vice versa), you're working too hard. Whether it's a Mac-versus-PC or Microsoft Word versus Corel WordPerfect, offer both of the best alternatives — and know when to recommend a switch.

Overcome objections.

Apple took steps to provide PC compatibility and data-translation services that allowed the systems to integrate more-or-less seamlessly into existing work environments. The message is obvious. Eliminate the reasons people use to justify why they should not choose your product.

Focus.

In his Macworld keynote speech, Jobs claimed the realization that Apple is the single largest IT provider to the education market in the world was "A bolt of lightning."

Over the past few years, it seemed as though Apple had forgotten who its core customers were. They were, and remain, the creative graphics professionals and the educators. Jobs pointed out that Apple is the single largest education supplier in the world, with 60 per cent of computers in schools, and 64 per cent of computers teachers use — $2.5 billion per year. And, he said, "these markets are growing at 20 per cent per year." Jobs acknowledged that Apple's share in these markets is shrinking, but there is still room for growth.

Your core customer base is likely to be different, but it is essential that you stay focused on who they are and what they want.

> *"Apple lost sight of some important ideals; now it is paying the price."*

Upgrades and consumables are good business.

It took Apple ages to realize that there was practically no profit in ink-jet printer hardware itself. The big money, of course, is in consumables, not ink-jet hardware. Similarly, the average buyer spends a lot more on training, support and software on a yearly basis than the initial computer initially costs. Apple finally smartened up: it started making fewer models, but let people upgrade them more easily. Easy "plug-and-play" hardware installations have long been one of the things the Mac does best.

Stop selling bad products.

Apple, like all companies, needs to take responsibility for the markets it has created. Continuing to market trouble-prone hardware, as it did for several months with the problem-plagued 5300 series PowerBook-that-doubled-as-a-Hibachi, or the AppleVision 1710 monitors (dubbed "the worst product Apple ever made" by *Macweek's* Henry Norr) did plenty to sour Apple's reputation as a

provider of reliable notebooks and monitors. Yes, Apple has new products in these categories that show improvements in quality control, but the damage has been done. Some users jumped ship to the Mac clones, some leapt to the Wintel world. In most cases, they won't be back.

Lose the "not invented here" mentality and take notes.

Start borrowing good ideas from your competitors. Capitalize on the technologies you sell — it's the best possible product demonstration. Think about how computer technologies such as the multi-monitor support of Windows 98 or the Mac OS could be demonstrated as a solution. Consider the opportunities in other forthcoming innovations, such as file-based CDR authoring, clustering, "IntelliMirror," LANdesk (network diagnostics and user administration), RSX (3D audio) or VRML.

"People are willing to pay for greatness, but they have to be shown its advantages."

Admit mistakes.

When one occurs, turn on a dime and be quick to rectify any damage. Microsoft does more about-faces, and does them faster, than almost any company its size. Look at its position on NCs or Java, for example. Jobs wryly commented on Apple's problems in his keynote, "People have been working on great stuff at Apple ... it's just been the wrong stuff."

Also, work toward resolving troubled relationships. As Steve Jobs commented on the Apple versus Microsoft patent disputes that took them to court in 1988, 'Relationships that are destructive don't help anybody in this industry."

Don't sell what you can't deliver.

Jobs didn't even mention Apple's forthcoming operating system in his keynote. Why? It's not here yet. Jobs correctly recognized that his audience is tired of empty promises, of unfulfilled hopes. As the industry learned the day Adam Osborne pre-announced a suitcase-sized sequel he couldn't deliver, sales fall flat when something a lot better is just around the corner. Rather than hype Rhapsody, Jobs focused on the company's latest release and said Mac OS 8, which he characterized as "the core of Apple," has sold 1.2 million copies in two weeks, four times the company's wildest expectations.

Hire a marketing whiz.

Apple canned its long-time ad agency BBDO and rehired the ad agency that helped make it great. Only time will tell whether TBWA Chiat/Day (formerly Chiat/Day) can recapture the magic touch it demonstrated with the first ad it produced for Apple (the infamous "Why 1984 will not be like 1984" ad that aired only once during the 1984 Superbowl), but they're off to a reasonable start. At the Boston keynote, Jobs rolled out a "Think Differently" slogan that attempts to encapsulate the idiosyncratic character of the company's users.

Apple fellow Guy Kawasaki has written a number of books on marketing which are worthwhile reading for salespeople and CEOs alike. Check out *Selling the Dream* or *The Macintosh Way*.

Think again.

Don't be afraid to challenge your deeply held beliefs. Things change quickly. Is this product still the best solution? What markets are we competitive in? Who are our competitors? Apparently, Microsoft views Netscape as its competition, and now that Microsoft Web browsers are the default on both Apple and Wintel platforms, Netscape's probably not too happy about it.

It's the software.

Demonstrate great software. People are willing to pay for greatness, but they have to be shown its advantages. Bill Gates, when he announced his company's commitment to produce a version of Microsoft Office 98 for the Mac, warmed the hearts of many Mac users when he said: "In many ways, it's more advanced than what we've got on the Windows platform. It's not just a port."

Understand your audience.

For example, there was a wild chorus of boos to the announcement that Apple will make Internet Explorer its default browser on the Macintosh. Jobs knew this, and followed it up with "Since we believe in choice ... the user can, of course, change the default." When Jobs announced Microsoft's US$150 million investment in Apple, a chorus of boos turned to applause to the news that Microsoft's shares were "non-voting."

In closing, I'd like to leave you with a point from reader Robert Mollot (rmollot@compusmart.ab.ca), with whom I agree completely. He writes: "Listen to your customers, understand the values that drive their buying decision and then market products accordingly." CCW

Graeme Bennett is Managing Editor at The Computer Paper and is a former computer reseller. Based in Vancouver, he can be reached at graeme@tcp.ca.

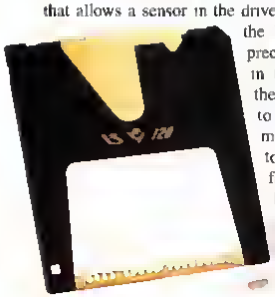
LS-120 SuperDisk: too little too late?

by David Tanaka

When I first heard about a new floppy drive technology way back in March of 1996, I thought it was a well-timed and welcome advance.

The LS-120 has many things going for it. It beats the popular Zip drive in terms of capacity, while offering a few benefits of its own. First, it is backwards compatible with 1.44MB and 720KB floppies, meaning it can read and write to those formats. But it is much faster than a floppy drive. It is also bootable, meaning PC makers could start using them instead of the normal floppy, as its 1.44MB capacity has become truly pitiful in this era of bloated files.

Developed by Compaq, Matsushita-Kotobuki, 3M and OR Technology, the LS-120 offers 120MB of storage on a floppy that is the same dimensions as 1.44MB media. The LS stands for laser servo, and therein lies the secret to the increased capacity. The diskettes have optical reference tracks laid down on them — a kind of guidance system that allows a sensor in the drive to position the heads more precisely. This, in turn, allows the data tracks to be written more closely together. In fact, the LS-120 has 2,490 tracks per inch, compared to 135 tracks per inch for a 1.44MB floppy.



The LS-120 also has a higher data transfer rate — 565KB/sec, compared to about 60KB/sec for a standard floppy, along with slightly faster average seek time, and faster disk rotation.

Considering the ubiquity of the floppy — every PC made since the mid-'80s has at least one — the market potential for both OEM and after-market sales seemed enormous. I figured everyone would immediately jump on it.

However, apart from Compaq (one of the original developers of the technology) announcing it would be including the LS-120 as standard equipment on some of its DeskPro models, the technology more-or-less disappeared from the horizon.

There have been a few announcements, however. In September 1996, Maxell announced it was making diskettes in the new format; in November, Matsushita-Kotobuki announced a plant that could produce 500,000 drive units per month; and in January, Mitsubishi announced similar production capacities for its plants. Early this year, a couple of PC vendors in Europe — Siemens Nixdorf and Fujitsu, announced they would be shipping PC models that included the LS-120 drive as standard equipment. Samsung Electronics also said it would be including the drive in its MagicStation PC, which will be sold only in Korea. In April, OR Technology, working with Precision Instruments, announced a US$199 upgrade kit that would be sold in the U.S. through CompUSA outlets.

Imation Launch

Fast forward to Comdex/Canada in July.

The LS-120 is alive and kicking according to the folks at Imation (the 3M spin-off that is now spearheading the marketing of the technology). With a marketing push that began in the U.S. with PC Expo in June, Imation will make sure the buying public knows about the technology with what it characterizes as a "massive consumer ad campaign" that will continue throughout the rest of this year. It has branded the technology "SuperDisk" and released a hardware product — a parallel-port LS-120 drive, along with media available in one, three, five or 10-packs.

The drive will be available later this month or next, according to Imation. The company sent over a unit at the end of July, and judging by the quality of the packaging, it could probably have started shipping the units to stores at that point. The packaging and documentation are all shrinkwrap quality — just what you'd expect to put on your store shelf. (Imation's parallel port drive lists for $355 and the discs are $27 each. For more information, see http://www.imation.com, or telephone 1-888-326-7754.)

Apart from a minor and easily fixable set-up characteristic that will affect some portable users, the drive works as it should. Basically it's a faster, more capacious floppy. However, why has it taken a year-and-a-half to reach this point of market development? I would have thought that every PC for the fall '97 season would be equipped with an LS-120. And as the days of even the 650MB CD-ROM disk seem numbered by the promise of multi-gigabyte DVD-ROM and DVD-RAM, one has to wonder whether a technology that delivers a skimpy 120MB is even worth pursuing.

But I'm pulling for it. This is not glamorous technology like DVD, but it is good basic technology for two reasons. It brings the capacity of the floppy more in line with the typical files sizes that people are now working with. And more importantly, it doesn't require the user to learn a new routine or interact differently with the computer. CCW

David Tanaka is a Vancouver-based journalist specializing in high technology, and is News Editor of The Computer Paper. He can be reached at david@tcp.ca.

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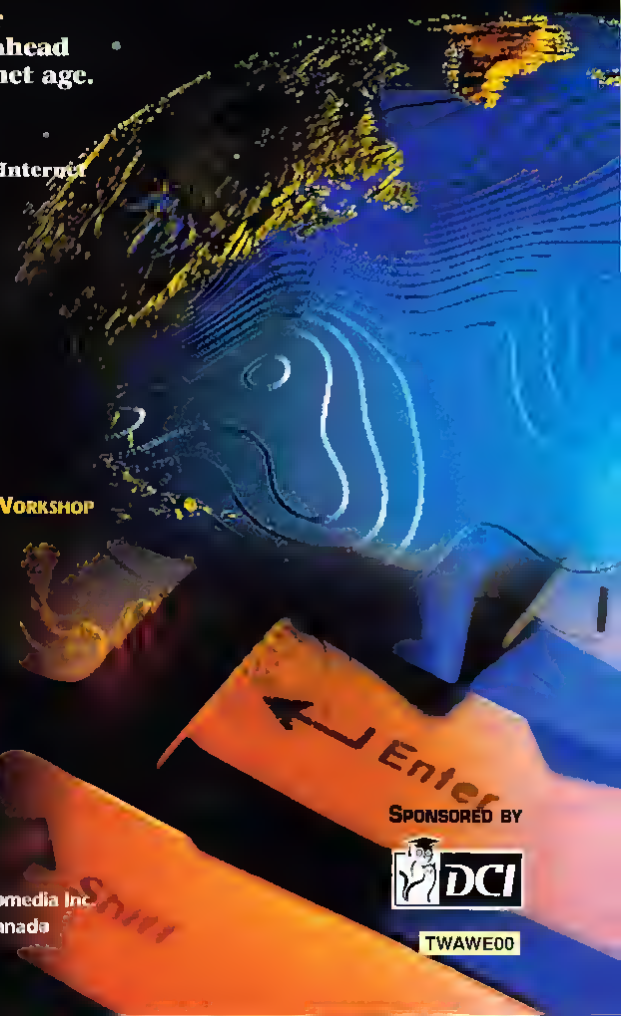

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Report from Branham

Software, Not Services, Yields Profits – Says Study

by Leslie Arrand and Margery Leach

If you're thinking of starting up an IT business, think products, not services. Branham Group Inc. analysed its database of the top 100 software and IT professional services companies, to gauge the performance of the Canadian IT industry in 1996. A targeted comparison of revenues generated per employee in the top software and IT professional services organizations reveals that the software industry generates significantly higher revenues per head. The top 10 software companies in terms of overall revenues generate an average of close to $260,000 per employee, while the top 10 services companies generate an average of only $101,000 per employee — about 2.5 times less than the software companies.

This is not surprising. Despite the reportedly manic pace of the software industry, the leading companies generally produce packaged products, many of them targeted at mass markets. Although they must conduct ongoing R&D and intensive marketing initiatives, large software companies are able to offset the financial impacts of these efforts through multiple product sales. These are typically facilitated by a strong channel infrastructure that helps to maximize product exposure.

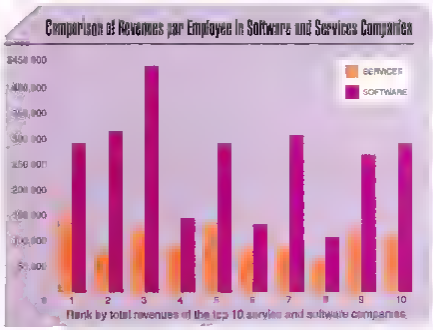
The services industry on the other hand, can only go so far in leveraging previous work. Systems integrators develop strong methedologies that can be duplicated to some extent, but each client will always present a unique problem. Targeted service and customization is the name of the game. Needless to say, this eats up resources.

As we move down the ladder to the smaller companies in both sectors, the comparison is much more balanced, with both sectors hovering around the $100,000 per head mark. Many of the smaller software companies focus on complex or niche-oriented software that requires a significant amount of customization, or they do not yet have the channel structure in place to support mass product sales.

Software companies also enjoy higher revenues overall: the number one software company generated over $450 million in revenues in 1996, while the number one professional services company generated $175 million.

With the right product and channel strategy, the software industry offers a much greater return on investment. The services industry must be catching on. Branham has noticed lately that many growing IT services companies are increasingly looking for ways to enter into the products business, by packaging the IT applications they originally developed for individual customers.

Leslie Arrand and Margery Leach are consultants at The Branham Group Inc., in Ottawa — an international marketing and management consulting firm with a stated commitment to 'Delivering Competitive Advantage to the IT Industry.' Phone (613) 720-2955, ext. 215, or fax (613) 720-0318.



Reader Poll

VOICE YOUR OPINION

Last issue, we asked:
Which most closely reflects your view of computer purchasers, in relation to Intel's MMX processor technology?

You said:

17% Many customers are very aware of the technology and technical benefits of MMX and are demanding MMX-based processors in their new systems

58% Some customers have a certain awareness of MMX and are interested in MMX systems, because it's viewed as the hot new technology

25% Many customers have little knowledge or understanding of MMX

This issue:
After some serious financial, management and directional struggles over at Apple Computer Inc., Apple and Microsoft Corp. have announced a wide ranging agreement that will see shared technology out into the future, and an immediate US$150 million cash infusion in Apple, by Microsoft.

Our question to you:
What effect will the partnership with Microsoft have on Apple?

Which most closely reflects your view?

- ☐ I'm optimistic that the financial input and technology partnership will help give stability to Apple and will lead to greater compatibility between the platforms.
- ☐ This could be a pragmatic move for the companies, but while increasing the viability of Apple, the relationship with Microsoft may eventually make Apple less of a unique technological and culture entity in the market.
- ☐ This is too little too late, for Apple. I doubt this will have any significant impact on Apple's downwards market-share slide.

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Settling down States-side

In an industry where it's always a struggle to find and keep skilled employees, many are leaving their Canadian homeland to answer the call of more work and better pay.

by Gary Davies

Skilled computing professionals are in constant demand, whether the employer is in the computer industry as a reseller distributor or vendor, or indeed a corporation looking to staff its information systems department. But increasingly, Canadian IT professionals are being courted south of the border.

Peter Ward, president of Ward Associates (an IT staffing firm), has seen a large number of talented Canadians swept from their home country by offers local companies simply can't match. And he sees nothing wrong with it whatsoever. "We're living in a global economy now and we're going to have to expect this," Ward says. "I don't know if it's a panic situation that we're in but it's certainly predictable."

Ward points to numerous factors to back up his assertions: better money, better opportunity, even better weather. "The monetary factor has a lot to do with it. Those who are making $50,000 here could be making US$75,000 down there. But there are other aspects, as well. "If they are footloose and fancy free they can go down to California and Florida and enjoy the good life. In some of these areas they might also face different or more challenging positions. The tax base is also much more attractive and the cost of living is less."

Ward says Canada is known worldwide as a breeding ground for good IT talent. "It's the best source in North America. We speak English, we're professional, we're technical."

Losing skilled IT professionals to the United States is nothing new to Canadian businesses. Companies have had difficult times over the last few years in both recruiting and retaining employees in this sector of the workforce. The result has been many either leaving for other job opportunities south of the border, testing the contracting waters, or both.

"Loyalty to corporations is disappearing throughout the workforce, but especially in the IT industry," says Joe Liu, senior manager at Deloitte & Touche Consulting Group in Toronto. "That mainly has to do with downsizing but also because IT professionals possess skills which are very portable."

A recent survey of 1,442 corporate chief information officers worldwide by Liu's company found that more than 60 per cent of them have difficulty recruiting employees in four key areas: client/server architecture, data modeling, distributed databases, and packaged software applications. The same survey found that approximately 40 per cent of CIOs have difficulty retaining employees in these areas.

The most difficult population to recruit, according to the survey, are client/server architects — cited by 70 per cent of the respondents. It is for these very reasons that the majority of companies have chosen to outsource their IT responsibilities, resulting in an extremely transient IT population.

In order to stem this mass exodus, Ward recommends more corporations focus on the retention of their IT employees. "Make sure you use them well and work harder at knowing who you have working in your IT department. And promote people internally a little bit before they're ready to be promoted — if only to keep them challenged."

In spite of all these suggestions, companies may still find mass movement of their IT employees for the simple reason that they can. Many are working as contractors, because they can keep their skills constantly tuned and because they bill by the hour.

"If some of these people were on salary, they could be working into the wee hours without a change in pay," Ward says. "Their only responsibilities are keeping track of their time and knowing what they know."

Bob Davies has been building client/server systems for the last 15 years. In that time, he has worked for a number of large corporations in Calgary but recently decided to go it on his own.

Now a full-time contractor, Davies makes a healthy living working for various companies in his hometown. He has a wife and two young children, lives in a posh southwest suburb, and rarely worries about where his next job is coming from.

Davies is like a lot of systems builders today in that he feels he can make better money, and a better name for himself, by working on a contract basis. Where he is unlike a number of his fellow Canadians is that he hasn't left his homeland to work south of the border, in spite of rampant rumors of better work and better pay. "I've thought about it," the Montreal native says. "But I've talked to a few guys who have done it and they've found out the grass isn't always greener on the other side. A lot of promises are made, but they aren't always necessarily kept. You really have to have a very unique skill to make the big bucks down there."

Liu commented. "When I'm trying to recruit here in Canada, I can't compete with the U.S. The straight exchange rate is 35 to 40 per cent alone. Plus, the opportunity in the U.S. is huge. The demand is around 10 times higher than it is here."

But as Davies points out, the general population is also 10 times larger in the United States. "If you do the math it's almost equal. "I just don't know that many people who have jumped (over the border)."

While Liu may not agree with that assessment, he does concede that those who do make the move south don't always stay very long. "We find a lot of people are coming back to Canada because culturally it's just not worth it." CCW

"I've talked to a few guys who have done it and they've found out the grass isn't always greener on the other side."
— Bob Davies

Gary Davies is a Calgary-based journalist who specializes in high-technology and business reporting.

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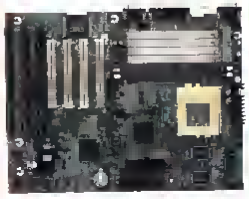

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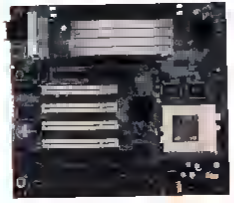

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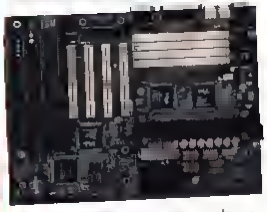

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Build-To-Order Gains Popularity In Market

by Paul Weinberg

The arrival of a more sophisticated computer user in the market-place is forcing the industry to rethink its emphasis on rigid, pre-built standard equipment models.

Much like how the automobile industry has evolved with a variety of car models to choose from, the customer will be able to order a PC built to certain specifications based on a range of configuration options.

The direct-selling Dell Computer Corp. started this trend a few years ago, but the practice has expanded with the announcement by both IBM Corp. and Compaq Computer Corp. of similar build-to-order programs available through their authorized resellers. The actual assembling of the customized PCs is often being handled by selected companies, largely distributors, who receive the base models from the manufacturers.

Many of the major distributors in Canada already have configuration facilities and are therefore prepared for an increase in orders. Both IBM and Compaq have announced that only organizations with high technical standards and ISO 9000 certification can qualify for the assembly of their hardware equipment.

> *"It eliminates the vendor having to pay the reseller to hold onto unsold inventory."*
> *— Bruce Stuart*

One of them is the Markham, Ont.-based Supercom of California Ltd. (Canada), which IBM Canada Ltd. has already chosen for its new program. Supercom president Frank Luk says he is now prepared for a ramp-up of thousands of orders. Up to 20 new assemblers are being hired for his Markham and Vancouver facilities. He anticipates that under build-to-order the 30 per cent price gap between name brand PCs and the cheaper clones will finally be "narrowed." Luk expects to see demand for stronger memory, hard drive upgrades, and the addition of items like video cards and CD-ROM. "We are an IBM factory supervised by IBM."

While IBM is seeking other partners, Compaq is still "considering" whether to have its build/configure-to-order products assembled at an approved Canadian facility or if the work should be done at its Houston plant in Texas, says Ron Hulse, Compaq Canada's director of channel sales and development. The strategic nature of networks and the Internet in the corporate world, as well as their complexity, he adds, "are the driving factor for the change in the distribution model."

A major difference between the two manufacturers is that Compaq is entirely focused on the high-volume purchasers in the corporate and government accounts, while IBM has no limits on the number of PC systems to be constructed upon request.

Nevertheless, the demand for flexibility in hardware specifications is coming primarily from the corporate/government market, not home users or small businesses, says Richard Morochove, president of the Toronto-based Morochove & Associates Inc.

Morochove states that build-to-order allows for a more accurate forecasting of PC market trends, but he warns it will not entirely eliminate shortages of popular products, which bedevil this industry. He also expects tremendous cost savings for resellers in terms of inventory that could eventually be passed onto the consumer. "Dealers don't have to keep [unsold] stock of different models."

But Susan O'Dell, president of the Mississauga, Ont.-based Service Dimensions counters that the price for a built-to-order system may be slightly higher. She finds in her research that PC buyers will accept this scenario if a bundled system contains sufficient components and is not filled with unwanted software add-ons. "As long as people are getting value, their wallets will stay open."

Build-to-order can be very positive for the reseller, "because he can concentrate on what he does best, which is selling," says Bob Pritchard, president of the Toronto-based R.J. Pritchard & Associates. The only possible downside, he adds, will occur if a system has not been constructed to the consumer's satisfaction and it ends up being shipped back and forth between the reseller and the distributor at the former's expense. "The onus will be on the reseller to appreciate what the customer wants."

Putting further pressure on the distribution/reseller channels is the offer by both IBM and Compaq in their build-to-order programs to have fully configured PCs available after 48 hours, although an IBM spokesperson adds some flexibility might have to be allowed in more sparsely populated areas of Canada.

It will take PC manufacturers between six months and a year to be fully prepared for build-to-order, states Bruce Stuart, president of Vancouver-based Channel Corp. Management Consultants Inc.

Build-to-order will "lower the cost per order dollar," Stuart predicts. "What it eliminates is the vendor having to pay the reseller to hold onto unsold inventory [in the form of a profit margin for the reseller]." Build-to-order also quickens the process, he adds, of resellers becoming order-taking agents for manufacturers who will have the purchased systems sent directly to the customer from the distributor's configuration facility.

Not all resellers accept this possibly diminished role, including Roger VanderBeek, network specialist and president of the Toronto-based Lan Shoppe Inc., an authorized Compaq reseller. Installation and configuration of servers are central to his business and he is not prepared to have the latter function performed by a third-party distributor. "I want to keep some control because every server installation is different."

Corey Sheppard, manager of the Friendly Computer store in Abbotsford, B.C., is not going to give up his custom PC business for the new order. "I enjoying building them. It is more fun."

He promises a three-year warranty and more flexibility in his willingness to source a greater variety of components for his largely Cyrix-based machines, if they are traceable in the market-place, than the manufacturers and their authorized channels which represent specific suppliers. He states "I can get better prices." CW

Paul Weinberg is a Toronto-based journalist, specializing in high technology reporting. He can be reached at pweinbg@interlog.com

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❑ Technical management
❑ Design, system and application engineers
❑ Marketing, sales managers

Which best describes your firm's primary business at your location? (check one only)
❑ Value added dealer/reseller
❑ Mass merchandiser
❑ Consumer electronics/office machine retailer
❑ Distributor/wholesaler/hardware manufacturer/OEM
❑ Software developer
❑ Systems integration/software consulting
❑ Government purchasing agents
❑ Computer maintenance/service company
❑ Hardware/software retailer
❑ Other third party and allied service firms

The systems my organization integrates or resells are based on the following: (check all that apply)
❑ DOS/Windows ❑ Networking
❑ OS/2/Compatibles ❑ Unix
❑ Windows NT ❑ Macintosh

What is the number of employees at this location? (check one only)
❑ 10,000 or more ❑ 250 - 499
❑ 5,000 - 9,999 ❑ 100 - 249
❑ 2,000 - 4,999 ❑ 20 - 99
❑ 1,000 - 1,999 ❑ Less than 20
❑ 500 - 999

What is your firm's approximate gross annual sales? (check one only)
❑ Over $50 million ❑ Over $5 million - $10 million
❑ Over $25 million - $50 million ❑ Over $1 million - $5 million
❑ Over $10 million - $25 million ❑ Under $1 million

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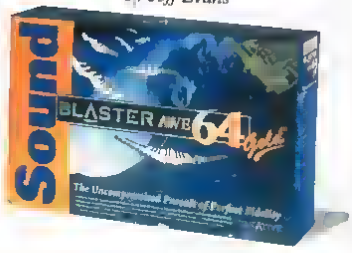
Sound Recommendations?

Know your buyer, in the PC audio market.

by Jeff Evans



In the struggle for cost reduction in a cut-throat computer retail market, audio is often the element of PC systems that is given the lowest priority by many resellers, as well as many end-users. In an increasing number of cases, however, a significant percentage of home PC users, and business PC users in particular application areas, can be attracted to better quality audio.

Low Margins

In the old IBM data processing scheme of things, any additional audio capability was regarded as a 'frill.' The Atari, Mac and Commodore Amiga computers took the lead in adding better native and third-party audio features throughout the 1980s. However, when all these other platforms fell out of contention for the leadership of the personal computing market, more attention was paid to incorporating better audio in the PC.

The driving force for PC audio was, in fact, computer games. Home PC owners demanded decent audio playback in entertainment software, and after a period of some confusion, the Creative Labs 8-bit Sound Blaster format became the de facto standard for MS-DOS and Windows computers by the mid-1980s.

Since then, 8-bit sound has given way to 16-bit, CD quality sound technology, which has been further enhanced with MIDI (Musical Instrument Digital Interface) sound synthesis, and wave table synthesis. Every imaginable format of audio speaker has been tried, from small speakers built in to the computer chassis or the monitor case, to speakers that hang off the monitor's exterior. With desktop space at a premium, computer users have benefited from the invention of small-sized 'bookshelf' speakers, which give big speaker quality in a small footprint. As well, the current hot trend is towards adding a third, 'sub-woofer' speaker to the traditional two stereo speakers, to add to the realism and impact of the sound.

The impending release of IBM's Via Voice natural speech input software marks the likely mainstream use of voice recognition, and every user of this technology will require a first-rate microphone as well as a sound digitizing card and speaker set.

The Audio Food Chain

For resellers, the audio market can be categorized according to consumer needs and budgets. At the bottom is the utility audio market. For less than $35, a basic Sound Blaster compatible card and small self-powered speakers will suit the undemanding PC user.

To sell to the serious PC gamer, an integrated multimedia bundle consisting of an input device (usually a quality joystick, less commonly a game pad), as well as a Sound Blaster-compatible sound card with MIDI and wave table synthesis features, a set of high-quality stereo speakers (including sub-woofer), a high-speed modem (for two-player and Internet gaming), and a high-speed 2D and 3D graphics card are all very desirable.

The name brand PC lines for the home (NEC Ready, IBM Aptiva, Compaq Presario, Hewlett-Packard Pavilion) typically have sophisticated audio features well integrated with fax/modem/telephony, voice input and multimedia capability. The upscale family PC buyer is often attracted to this kind of solution, but unfortunately, this is a fairly limited segment of the market.

Many upscale PC buyers are also audio and video enthusiasts, and are interested in home video and home theater technology, and demand computer audio with similar high quality.

An additional group of audio-conscious PC users are musicians, including amateurs, students, teachers or professionals. They typically want the ability not just to play back recorded sound, but to sample high-quality audio, compose and edit original music, play it back from external synthesizers, and perhaps combine audio with graphics and video for multimedia, Web authoring or video production.

3D Audio

Over the last year or two, a great many products have announced '3D sound' capabilities. 3D audio is based on the binaural nature of normal human hearing. (We have two ears, one on each side of the head, which receive nearby sounds from slightly different angles, and at slightly different timing.) This separation of our natural sound 'inputs' allows us to track and locate the sources of nearby sounds. A simple monaural speaker system will give only a single, unconvincing source for the sound being output, lacking the audible cues that tell us where actions are happening. A stereo sound system will do somewhat better at simulating a realistic sound environment, and a variety of techniques are employed to somewhat improve stereo sound output. This includes matrixing (which takes a two-channel audio signal, and outputs more than two channels), and Parametric Spatialization (which takes monaural channels, and interprets dimensional parameters to specify the position of 'objects' in the soundfields). Effective 3D audio systems are based on exploiting the spatial audio cues based on the distance between the listener's two ears. The time difference between when a sound vibration enters one ear, and then enters the other is known as the Interaural Time Delay (ITD).

Really effective 3D audio systems use sophisticated software to make false audio cues to trick the listener's hearing so that different sounds seem to be coming from different locations. Creative Labs, for example, (http://www.creaf.com or (408) 428-6600), acquired a company called E-mu that is developing 'multi cue' 3D audio technology. E-mu's technique is based on studying human hearing, and then using a wide array of tricks that give layers of false cues to the listener, resulting in a very realistic simulation of natural sound. 3D audio is of particular importance in games, especially 'immersive' or virtual reality games.

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What's Hot: A Sampling

In addition to its ongoing pioneering work in 3D audio, Creative Labs is still a paceseller in sound cards, with its flagship SoundBlaster AWE64 and AWE64 Gold wave table audio card family. The '64' refers to these cards' ability to compose music using 64-note polyphony from a single MIDI device, which can result in extremely rich sounds. The cards also produce real-time digital effects such as reverb, chorus and delay, and can add up to 28MB of RAM to increase the range of Soundfonts and instruments. The AWE 64 also supports 3D positional audio and spatialization to create 'immersive' sound environments. As well, AWE64 fully supports the latest audio capabilities of the Web, including NetMeeting, RealAudio, and WebPhone software. The AWE64 also has full duplex support, meaning that it can play back one set of sounds while digitally recording another set. This allows for a range of possibilities, including Internet phone conversations and overlaying audio tracks.

Among the other popular brands of audio cards are Audio Trix Pro from Mediatrix Peripherals. Audio 16 from Diamond Multimedia, and the Tropez Plus from Turtle Beach. For notebook computer users who need better than the often-limited on-board audio chipset of an average PC, Roland makes an SCP-55B Sound Canvas card, an analogous product to its Sound Canvas SCD-15.

Three-speaker stereo sound sets are all the rage in the PC market, since they can offer a 'sound experience' to the user which comparable to a good quality 'hi-fi' stereo.

Creative's top-of-the line offering, SoundWorks by Henry Kloss, is touted as being compatible with TVs and portable stereos, as well as PCs. The system consists of a pair of compact but good-quality satellite or bookshelf speakers and a big, heavy amplified subwoofer that incorporates a three-channel amplifier and frequency-matched crossover electronics. There are many other suppliers competing in the PC speaker market, of course. Hong Kong-based QuickShot produces a wide range of low-cost speakers, ranging from the 15-watt Sound Force 1 and 2 models, through to the Sound Machine speaker/sound card/joystick bundles. Some sound cards come with microphones or headsets for voice input and many voice recognition packages also come with a microphone, but microphones are also available separately. For example, ShureBrothers Inc. (http://www.shure.com, 1-800-257-4673) offers the BW501 model for speech input headset, priced at about $70.

A reseller who understands the basics of the computer audio market can either upsell a customer to better audio components at the time of the original sale, or make additional sales over time, as the customer upgrades their system. CW

Jeff Evans is Associate Editor of Canadian Computer Wholesaler. He can be reached at jeff@tepon.com.

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Computers For Students

Dollar-awa… back-to-… buyers can now afford power-packed PCs!

by Jazz Bhoot, Tim Bingham-Wallis and Steve Halinda

School days, school days. From parents of grade school kids, to university students — many are on the search for a PC as an educational accessory. And while this demographic may be budget-conscious, the good news for your customers is that increasing amounts of power and functionality are hitting the streets at lower prices.

Resellers, take note. Intel is at it again. By the time this article is published, Intel will not be manufacturing anything under a 166MHz MMX processor. On the chopping block will be the P-120s, the 133s, the 150s and the plain non-MMX 166MHz chips.

In the coming months, the selection of powerful processors will get even more complicated. Intel will release a 300MHz Pentium II late in the year and is expected to release a 233MHz version of its Pentium MMX by the time you read this. This move still leaves the option open to Pentium Pro line processors, for those who are looking something between 166MHz and a Pentium II.

Although the Pentium Pro was the successor to the Pentium processor, it wasn't much of a success on the desktop. This was due mainly to the chip's 32-bit code addressing. The Pentium Pro was only truly popular for server and high-end applications.

Intel's MMX Pentium is a rather serious success. Most MMX PCs run standard business software up to nine per cent faster than the non-MMX machines they replace, and for a nominal cost. When tested with MMX-enabled programs, MMX PCs perform even better. But MMX magic doesn't seem to help system models that have continually suffered from below-average speed. These MMX machines must match the MMX processors with the appropriate motherboards that have been complimented with EDO RAM is pipeline cache.

Is Intel really calling the shots?

Intel's monopoly on processors has begun to buckle under pressure from competing CPU makers Advanced Micro Devices and Cyrix. The two companies are ramping up production on the strongest selection of non-Intel CPUs available in years. Independent benchmarks claim that a Cyrix 6x86 P166+ — a 133MHz processor — slightly outperforms Intel's Pentium 166MHz processor. And if the big PC manufacturers buy those Cyrix processors instead of Intel's, PC users will undoubtedly enjoy further reductions in processor prices.

What's in it for you and your customers? Cheaper processors, and as a result cheaper and faster PCs. Competition from AMD and Cyrix has lowered the prices of Pentium MMX and Pentium II systems, so even if your customer is buying a Intel-based PCs, they'll pay less than if AMD and Cyrix weren't around. Intel recently slashed the price of its processors even as system manufacturers were waiting for new AMD and Cyrix CPUs to get into production.

Your customers, even if their bankrolls are slim, don't have to give up performance. Lower prices have also allowed room for the goodies that many of them will want — such as high-speed modems, sound cards, more RAM, larger hard drives, color printers and bigger monitors. Buyers can pick and choose.

This month we asked vendors to send us what they consider entry-level systems. Those who have heard of Intel's plans to cease production of processors under 166MHz MMX have opted to send us just that. Others provided us with the vanilla version of the 166MHz processor without MMX technology. A few even decided to send us what we had originally planned to test — processors operating at 133MHz. For some vendors, the idea of putting together entry-level machines isn't all that thrilling, so they declined to participate.

The machines were all configured to run in a resolution of 800 by 600 at a 16-bit color depth (65,536 colors). We used the BAPCo Sysmark32 benchmark suite to test each machine's performance.

While we're focusing on "computers for students," with this examination, certainly these systems would also be attractive for many of your other technology-hungry, price-conscious buyers.

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Government Computer: (613) 789-6431

A-Open

Suggested Retail Price: $1,435

Street Price: $1,399

Reseller Price: $1,330

Marketing Support For Resellers.
Co-op advertising
Reseller referrals

Maintenance And Technicel Relationship With Resellers:
Two-year warranty includes parts and labor
Optional on-site warranty
Toll-free tech support
Web site includes technical information and drivers

Volume Discounts: Yes

Demo Unit Availability: Yes

A-Open's View Of The Market:
"We have shipped over a thousand of the products in the last two months. We believe that this is a very good product for students to use since the system has everything built in. Customers just buy and play. The price is very attractive," says Elton Lam, marketing manager at Comtronic — distributor of A-Open systems.

System Strengths
"Our price is very reasonable, however we are using quality components, such as an Intel CPU, Acer components, and a Microsoft mouse. Our system is bundled with Corel Suite software," he said.

Editors' Notes
One of the very few vendors who provided us with a 133MHz system, Comtronic offers a machine with a good balance of value and completeness. This system has all of the basic components to get your customer started at a competitive price. The processor is backed by 256KB of Level-2 cache, and the standard RAM complement is 16MB. The video card in this system is fairly basic, an S3 Trio64V with 1MB of onboard memory. Storage comes in the form of a 1.3GB drive by JTS. Multimedia components include the Acer FX-3D sound card and an 18X CD-ROM, also by Acer. To get your customer on the 'Net, there is a 33.6Kbps modem also by Acer, which is upgradeable to 56Kbps. Two very handy additions to this system are the Acer 14-inch monitor and Corel WordPerfect Suite 7. At just $1,330 for resellers, a printer could easily be added while keeping the system cost below $2,000.

Daiwa

Street Price: $1,249

Reseller Price: $1,149

Maintenance And Technical Relationship With Resellers:
Two-year warranty includes parts and labor

Volume Discounts: Yes

Editors' Notes:
The system we received this month consists of a 133MHz processor, 512KB of pipelined cache and 16MB of EDO RAM. The motherboard by Intel makes use of the new TX chipset, allowing the machine to take advantage of new features such as Ultra-IDE hard drives. The video subsystem consists of an ATI 3D Xpression video card with 2MB of EDO RAM onboard. Multimedia components include a 16-bit sound card utilizing Yamaha's YMF718 chipset with wavetable and a Panasonic 24X CD ROM drive. This machine offers an excellent balance of good quality components, good performance, and an excellent price.

iNET

Suggested Retail Price: $1,650

Street Price: $1,500

Reseller Price: $1,350

Reseller Authorization
Required. Authorized dealers are eligible to apply for co-op programs, and will receive promotional materials.

Marketing Support For Resellers.
Co-op advertising based on volume sales
Marketing funds
Reseller referrals
Resellers are listed on the Web site
Regional advertising

Maintenance And Technical Relationship With Resellers
Three-year warranty includes parts and labor
Dealer-specific space on the Web site
Web site includes technical information and drivers

Volume Discounts: Yes

Demo Unit Availability: Yes

iNET's View Of The Market:
"Since CPU prices have dropped significantly in the third quarter I believe there will be another demand wave in September during the "back to school period." The iNetPRO P166 multimedia system will be a hot product in the market, not just because of the aggressive pricing, but the quality, performance, and features," says Daniel Lo, president of LCF — distributor of iNETPRO systems.

Editors' Notes
This machine was one of the very few to arrive in our lab powered by a non-MMX 166MHz processor. It made use of a good assortment of popular components such as an S3 ViRGE 3D video card with 4MB onboard, the new Quantum ST UIDE hard drive with a capacity of 2.1GB, a Toshiba 16X CD-ROM and a Supra 33.6Kbps fax modem.
Other components in this system include a quality ASUS motherboard with the new 430TX chipset, and a 16-bit sound card using the SY1816 chipset. In its 166MHz class, this computer came second place in terms of benchmark performance. It is reasonably priced at a cost of $1,350 to resellers and it includes a copy of Corel's Office Suite.

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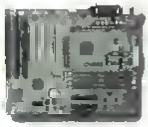

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Azura

Estimated Street Price: $1,100

Maintenance And Technical Relationship With Resellers:
Two-year warranty includes parts and labor
Optional on-site warranty
Web site includes technical information and drivers

Editors' Notes:
This month's Azura system makes use of a plain 166MHz processor, soon to be discontinued. It's configured with 512KB of pipelined cache, 16MB of EDO RAM, an S3 ViRGE 3D graphics card with 2MB of EDO RAM onboard, a 2GB JTS hard drive and a Toshiba 16X CD-ROM. A great addition to this system is the Motorola ModemSURFR, offering 56Kbps download speeds using the Rockwell chipset. Priced at just $1,100, this machine is one of the lowest priced systems in this survey and comes with a standard two years parts and labor warranty.

Mynix Mycomp

Suggested Retail Price: $1,995

Street Price: $1,895

Reseller Price: $1,495

Reseller Authorization:
Resellers must have a sales office and at least one technician.

Marketing Support For Resellers:
Reseller referrals
Toll-free line in to resellers
National advertising

Maintenance And Technical Relationship With Resellers:
Three year warranty includes parts and labor
Toll-free tech support
Dedicated technical BBS
Web site includes technical information and drivers.

Volume Discounts: Yes.

Demo Unit Availability: Yes, for large dealers

Mynix's View Of The Market:
"This product is targeted at entry-level student and home users for Q4 this year. Our product is positioned to offer this segment of the market the best price/performance ratio," says Kim Lee, vice-president of Mynix Technologies.

System Strengths:
"With the MMX Pentium processor, Intel TX chipset, Ultra-ATA hard disk and Matrox 2MB Mystique VGA card, this system will deliver excellent performance," said Lee.

Editors' Notes:
In our last survey, the machine from Mynix Technology took first place on our benchmark suite thanks to a combination of great components and a well-designed motherboard. This month, however, the system we received was unable to make it through our entire benchmark suite, crashing at the database portion of it. The system was very well put together, and would have certainly been in the top few had the motherboard been of a different brand. The configuration we received consisted of 16MB of EDO RAM, a speedy Matrox Mystique video card with 2MB of SGRAM onboard, the new Quantum ST hard drive with UIDE interface, a 16X CD-ROM and a Zoom 33.6Kbps fax modem. The system carries a reseller price tag of $1,495 and comes with a three-year parts and labor warranty.

Compucon

Suggested Retail Price: $1,580

Reseller Authorization: Yes, subject to location

Marketing Support For Resellers:
Co-op advertising
Reseller referrals
Toll-free line in to resellers
Resellers are listed on the Web site
POP displays

Maintenance And Technical Relationship With Resellers:
Two-year warranty includes parts and labor
Optional on-site warranty (offered by resellers)
Optional third year extended warranty
Reseller can offer service
Web site includes technical information

Volume Discounts: Yes

Demo Unit Availability:
Available for authorized Compucon dealers only

Compucon's View Of The Market:
"This is an entry system for home and education," says Allan Ng, president of Fasteeh — distributors of Compucon systems.

System Strengths:
"Systems are designed to meet industrial server standards as if they will be running 24 hours non stop. Reliability stability compatibility (with major operating systems and applications), connectivity and performance are the key strength of Compucon machines. All machines come with well-documented technical information," said Ng.

Editors' Notes:
Fasteeh sent us a PC equipped with a Pentium 133MHz processor. Its configuration was fairly typical of what we had expected to see from most vendors. Although its inner workings are not comprised of all the latest technology, they still offer plenty of performance and value. To start, there is 16MB of EDO RAM, a WinFast S600DX video card equipped with 2MB of EDO RAM, a sound card using the Yamaha 3D chipset, and a Quantum Fireball 1 2GB drive. To round out the system, are Panasonic's latest 24X CD-ROM drive and a speedy 33.6Kbps modem from Supra. Of the three systems equipped with the P-133 processor, the Compucon machine came out on top in our benchmark tests. It carries a price tag of $1,580 and includes a three-year parts and labor warranty.

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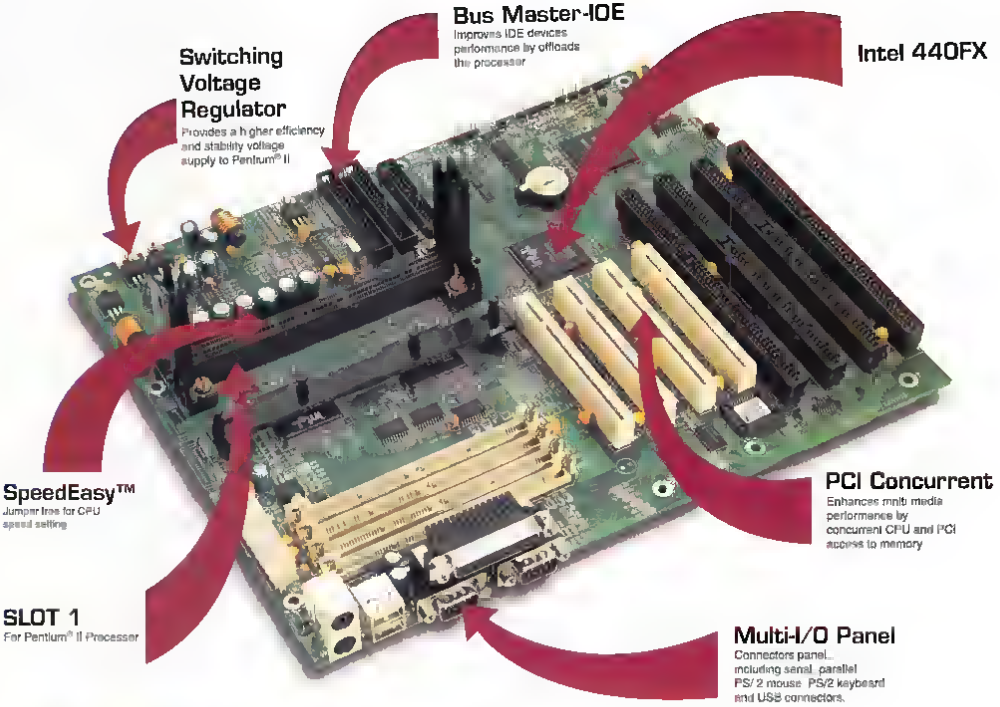

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Computers For Students

Sept. 97

	A-Open	Azura	Compucon	Daiwa	Deriue
Processor	Pentium 133	Pentium 166	Pentium 133	Pentium 133	Pentium 166
Cache size	256KB pipeline	512KB pipeline	512KB pipeline	512KB pipeline	512KB pipeline
Motherboard	Acer AP5VM	Shuttle		Intel TX1	
Chipset	430VX	430VX	430HX	430TX	
RAM	16MB EDO	16MB EDO	16MB EDO	16MB EDO	32MB EDO
Video Card	S3 Trio64V	S3 ViRGE 3D	WinFast S600DX	ATI 3D Xpression	S3 ViRGE 3D
Video Memory	1MB EDO	2MB EDO	2MB EDO	2MB EDO	2MB EDO
Monitor	Acer 14-inch	None	None	None	None
Sound Card	Acer FX-3D	Opti 931	Yamaha 3D	Yamaha YMF718	SB16
Hard Drive	JTS Champ	JTS	Quantum Fireball	Quantum ST	Fujitsu
	1.3GB EIDE	2.0GB EIDE	1.2GB EIDE	2.1GB UIDE	2.1GB EIDE
CD-ROM Drive	Acer 18X	Toshiba 16X	Panasonic 24X	Panasonic 24X	Panasonic 24X
Modem	A-Open 33.6	Motorola ModemSURFR	Supra 33.6	None	USR Sportster 33.6
System BIOS	AMI	Award	Award	Award	Award
Operating System	Windows 95	Windows 95	Windows 95	Windows 95	Windows 95
Extras	Multimedia Speakers	Multimedia Speakers	Multimedia Speakers	Multimedia Speakers	Yamaha M7 speakers
Windows Benchmarks					
Desktop Publishing	92	116	110	112	132
Desktop Graphics	170	217	178	177	241
Desktop Presentation	98	129	109	110	147
Word Processing	90	112	101	103	134
Spreadsheet	126	150	147	132	156
Database	91	114	112	106	128
Sysmark 32	104	130	119	116	146
Contact	(905) 479-8336	1-800-863-6722	(604) 279-9686	(888) 818-4487	(403) 640-0002
Internet contact	www.comtronic.ca	www.empec.ca	www.compucon.com	www.daiwa.net	
Suggested Retail Price	$1,435		$1,580		$1,900
Street Price (or estimated)	$1,399	$1,100		$1,249	$1,850
Reseller Price	$1,330			$1,149	$1,560
"Warranty (# of years labour, parts)"	2L, 2P	2L, 2P	2L, 2P	2L, 2P	3L, 3P

Sept. 97

ET	Mynix Mycomp	OA Comp	Seanix	STD	Ultinet
ntium 166	Pentium 166 MMX	Pentium 166 MMX	Pentium 166 MMX	Pentium 166 MMX	Pentium 166 MMX
2KB pipeline	512KB pipeline	512KB pipeline	512KB pipeline	512KB pipeline	512KB pipeline
SUS TX97-E	A15TT	Shuttle	Yukon	QDI	Intel
0TX	430TX	430TX	430HX	430TX	430TX
MB EDO	16MB EDO	16MB SDRAM	16MB EDO	32MB SDRAM	32MB SDRAM
ViRGE 3D	Matrox Mystique	Tseng ET6000	S3 Trio 64V	ATI 3D Xpression	Matrox Millennium
MB EDO	2MB SGRAM	2MB MDRAM	1MB EDO	2MB EDO	4MB WRAM
one	None	None	None	None	None
1816	ESS1868	Brevo 128P	DCS-S611	SB32	SB16
uantum ST	Quantum ST	Quantum ST	Western Digital	Quantum	Quantum Fireball
1GB UIDE	2.1GB UIDE	2.1GB UIDE	1.6GB EIDE	2.1GB EIDE	3.2GB EIDE
oshiba 16X	BCD 16X	Toshiba 16X	8X	Panasonic 24X	Liteon 16X
upra 33.6	Zoom 33.6	None	33.6Kbps	Motorola 56Kbps	USR 33.6
ward	Award	Award	AMI	Award	Award
Vindows 95	Windows 95	Windows 95	Windows 95	Windows 95	Windows 95
	Multimedia Speakers	Multimedia Speakers		Multimedia Speakers	Multimedia Speakers
7	142	154	130	163	166
3	226	226	225	280	258
2	151	157	139	185	188
8	134	145	125	165	167
7	183	196	164	184	207
3	N/A	151	122	152	166
6	N/A	165	142	177	187
4) 303-9628	(514) 335-2456	1-800-910-3388	1-800-867-2649	1-800-463-6783	1-800-513-7732
ww.lcf.com	www.mynix.com	www.oacomp.com	www.seanix.com	www.std.net	www.ultinet.ca
650	$1,995			$1,799	$1,699
500	$1,895	$1,268	$1,599		
350	$1,495				
3P	3L, 3P	1L, 1P	3L, 3P	2L, 2P	2L, 2P

Darius

Suggested Retail Price: $1,900

Street Price: $1,850

Reseller Price: $1,560

Reseller Authorization Requirements:
Resellers must have qualified PC technicians on staff, and not carry more than one IBM-compatible brand

Marketing Support For Resellers:
Co-op advertising (depends on sales volume and margin which are determined by Darius management)
Reseller referrals
Toll-free tie in to resellers

Maintenance And Technical Relationship With Resellers:
Three-year warranty includes parts and labor
Toll-free tech support

Volume Discounts:
Yes, for resellers who deal with educational institutions and corporation employee purchase plans

Demo Unit Availability And Restrictions:
A limit of one demo Darius system is available for resellers to purchase for five per cent off the regular cost

Darius's View Of The Market:
"Our products are positioned in a market where end-users are very sensitive about the money they spent. Darius systems are fully CSA-approved to assure only quality components are being installed and fully configured before shipping so that when dealers receive their Darius system, all they have to do is to install the extra software and specific requirements from their end-users," said Jennifer Chan, sales manager at Darius.

Editors' Notes
This system from Darius was well-configured with quality components, although it carried a higher price tag than most of its competitors. It was configured with 512KB of pipelined cache, 32MB of EDO RAM, an S3 ViRGE 3D video card with 2MB onboard, a Sound Blaster 16 sound card, a 2.1GB hard drive from Fujitsu, a Panasonic 24X CD-ROM drive and a USR Sportster 33.6Kbps fax modem upgradeable to 56Kbps. Also included in the system is a pair of Yamaha M7 speakers. While its price was higher than most others in this survey, it did manage to come out on top when it came to raw performance compared to other plain 166MHz machines. Plus, the system comes with Corel WordPerfect Suite 7 or Version 8 when available to OEMs. Customers can also choose either Lotus SmartSuite 96 or 97. The system is available to resellers for $1,560 and comes with a three-year parts and labor warranty.

OA Comp

Street Price: $1,268

Editors' Notes
The third fastest machine in this month's survey came from OA Comp. It features the 166MHz MMX processor, 512KB of pipeline Level-2 cache on a motherboard with the 430TX chipset and 16MB of SDRAM. The Tseng ET6000 video card helped this machine achieve its overall high score, thanks to its fast graphics processor and high-speed MDRAM, totaling 2MB. The Quantum ST UIDE hard drive seems to be a favourite among several contenders in this month's lab, and this machine from OA Comp was also equipped with it. Rounding out the system is a 16X CD-ROM from Toshiba, a 16-bit sound card from Bravo featuring the 128P chipset and a pair of multimedia speakers. Also included in this system package is the Microsoft CD Bundle '97 which consists of five Microsoft titles. The very competitive price tag of just $1,268 makes this one hard to resist.

Seanix

Estimated Street Price: $1,599

Maintenance And Technical Relationship With Resellers
Three-year warranty, parts and labor

Editors' Notes:
Seanix sent us a typical student PC. Its configuration includes a Pentium 166MMX processor, 16MB of EDO RAM, a popular Western Digital hard drive with a capacity of 1.6GB, an affordable S3 Trio64V video card with 1MB onboard and a 33.6Khps fax modem. Multimedia is achieved through the 16-bit sound card and the 8X CD-ROM. Although 8X CD-ROMs are virtually a thing of the past, they are still quite adequate for the typical student. The system comes with McAfee Virus Protection Version 2.04, Trio Communications Software and Carbon Copy. The only thing we would change on this system would be the video card. Although it certainly helps keep the system cost down, it doesn't offer much in the way of performance. Other than that, the system is ideal for anyone looking for an entry-level machine.

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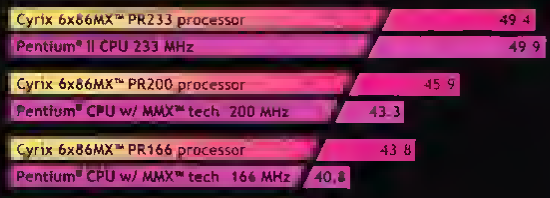

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STD

Suggested Retail Price: $1,799

Marketing Support For Resellers:
Co-op advertising
Reseller referrals
Toll-free tie in to resellers

Maintenance And Technical Relationship With Resellers:
Two-year warranty includes parts and labor
Optional on-site warranty
Toll-free tech support
Web site includes technical information and drivers.

Volume Discounts: Yes

Demo Units: No

STD's View Of The Market:
"The Pentium 166MMX is an entry-level system designed to suit the needs of the end-user. The 56Kbps modem is designed for a high-speed Internet connection. The 01 Communicate software provides access to all forms of communication (E-mail, fax capabilities and phone message service), says Leonard Chan of STD.

Editors' Notes:
The second fastest system in this month's survey comes from STD. The CompuPartner brand is quite familiar to the Lab Test, having been part of our testing process for quite some time now. It may not be the cheapest system in the survey, but it sure packs a punch when it comes to offering excellent components while keeping the price well under $2,000. The 166MMX processor is helped along by 512Kbps of pipelined cache and 32MB of SDRAM. The ATI 3D Xpression offers good 2D and 3D performance. Other popular items include the Sound Blaster 32 sound card, the Quantum ST 2.1GB hard drive, the zippy Panasonic 24X CD-ROM and the Motorola 56Kbps X2 modem. This system incorporates a jumperless motherboard from QDI which allows for control of the system's speed from within the BIOS. This can save time and headaches when it comes to upgrading processors and worrying about putting the wrong jumper in the wrong place. Software titles bundled with this system include 01 Communicate! and the Microsoft Plus Pack for Windows 95. The system is priced at $1,799 and includes a two-year warranty on parts and labor.

Ultinet

Suggested Retail Price: $1,699

Marketing Support For Resellers:
Co-op advertising
Marketing funds
Reseller referrals
Toll-free tie in to resellers
National advertising
Fax blitzes

Maintenance And Technical Relationship With Resellers:
Two-year warranty includes parts and labor
Toll-free tech support

Volume Discounts: Yes

System Strengths:
According to the company: "All systems are built and backed by Ultinet's two year parts and labor warranty. Systems are supported by "live" technical staff, and Ultinet's 13-year reputation."

Editors' Notes:
Ultinet managed to build the fastest computer and is priced so that every student will want one. The system is powered by a 166MHz MMX processor. 512KB of pipelined cache and 32MB of SDRAM. The addition of a Matrox Millennium with 4MB of WRAM definitely helped this system achieve its high score. Storage won't be a problem with the 3.2GB Quantum Fireball hard drive, which offers not only plenty of storage space, but also improves overall system performance. Finishing off the system are components such as a USR 33.6Kbps voice/fax modem, a 16X Liteon CD-ROM and a Sound Blaster 16 sound card. The package includes a "mini-office suite" and a two-year parts and labor warranty. The price tag reads a modest $1,699.

Editors' Choice

Sept. 97

Due to the nature of this month's review, our awards will be handed out for the various classes of processors we tested. Our normal policy is to award three winners, one for a Performance category, one for Price/Performance, and one for Overall Value. Because our focus this month was less on performance and more towards ***overall system value***, we will present three awards for that category.

Pentium 133 Class
Daiwa
In this particular class, the computer from Daiwa is a clear winning choice. It offers everything an entry-level system should, at a price that's very hard to resist.

Pentium 166 Class
INET
The system from INET is not only well-priced, but offers great performance with a slew of well-known, quality components.

Pentium 166 MMX Class
Ultinet
If your customer wants an entry-level machine that will last for quite some time, this month's Ultinet system should not be passed up. It offers components that would normally make up a higher-class machine but it maintains an entry-level price. CW

Steve Halinda, Tim Bingham Wallis and Jazz Bhoot are CCW's Lab Test Editors. The can be reached at (416) 535-8404.

Watch Out!

MS-6111
(Intel 440LX PCIset, ATX)

- Support Intel 233 to 266MHz, or even faster Intel® Pentium II Processor with MMX Technology
- Modem Ring Wake-up, Soft Power Off
- Peripheral protection through Poly Fuse
- With NS LM-78 Controller on Board (Intel Hardware LDCM) Hardware Monitor
- System Temperature Monitor
- Processor Temperature Monitor
- Chassis Intrusion Monitor
- Fan Speed Monitor
- Fan Speed Control on CPU, Power Supply and System fans
- Supports a maximum memory size of 512MB with SDRAM or 1GB with EDO / FP DRAM
- System bootable from LS-120, ZIP through BIOS setup
- Supports Ultra DMA/33 synchronous DMA mode transfer up to 33 MB/sec
- Provide 1 A G P slot, support 66/133 MHz 3.3V devices (30% to 50% faster than PCI)
- Keyboard Password Wake Up (For Winbond 977TF V C or later version)
- MSI Super Package CD (3 in 1)

MSI provides system software to Protect and Enhance your performances

- **Intel LDCM Software** - Help you to access the system for efficient centralized management (Option)
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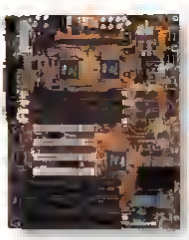
MSI offers you the most awaited Pentium II mainboard with AGP Technology Ready!



MS-6109
(Intel 440FX PCIset, ATX)

- Support Single 233 to 300MHz Pentium II Processors with MMX Technology
- Modem Ring Wake-Up, Soft Power Off
- Switching Voltage Regulator on board
- Supports EDO FP DRAM with ECC function, Max. 1GB memory on board
- Dual Channel support independent Timing of up to 4 IDE HDD/CD-ROM Devices
- Support PIO Mode 4 and Bus Master IDE
- Dual USB 1.0 ports for serial transfers at 12Mbit/sec

MS-5156
(Intel 430TX PCIset, Baby AT)

- Support all available Pentium Processor with MMXTM Technology or M2 and K6 Processors
- Modem Ring Wake-Up, Soft Power Off
- Keyboard Password Wake-Up (For Winbond 977TF V C or later version)
- Support AT/ATX power supply connector
- Peripheral Protection through Poly Fuse
- Compliant with PC97 Standard
- CPU Fan On/Off Control
- Support 3.3V/5.0V PCI cards
- Optional NS LM-78 Controller on Board (Intel Software LDCM)
- System Voltage Monitor
- CPU Fan Speed Monitor
- Support S.DRAM, EDO, FP DRAM Max. 256MB Memory on Board
- System bootable from LS-120, ZIP through BIOS setup
- Supports Ultra DMA/33 synchronous DMA mode transfer up to 33 MB/sec.
- MSI Super Package CD (2 in 1), MSI Super Package CD (3 in 1) for optional LM78

Germany PC Professionell July 1997 Edition Best Editors' Choice MS-5147

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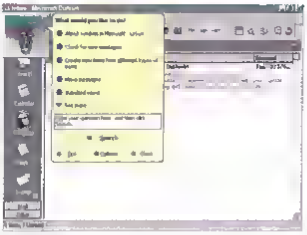
Groupware shapes workgroup computing

by Dan McLean



Microsoft's Outlook organization/communications application is a key part of Office 97's workgroup capabilities

Want to start a doozie of an IT debate? If so try to define workgroup computing.

Fifteen years ago, you probably wouldn't have been able to come up with a definition. Five years ago you'd have probably guessed at some type of E-mail that drove a simple scheduling application. Today, the answer starts at the notion of multifunction groupware and messaging, and stretches out to all manner of collaborative computing tasks, across communities as far-flung as the Internet extends. Ten years from now — who knows?

To keep the discussion focused, you'd probably agree groupware — software that enables a range of collaborative computing functions and is designed to help people work together — is the foundation for workgroup computing. "The precise definition of groupware is everything I do on my desk all day long. That's what groupware and workgroup computing is to me," says Tim Sloane, director of Internet infrastructure at consultancy Aberdeen Group in Boston.

Adds Mike Levy, director of marketing for Novell Canada Ltd., "There are no boundaries to the workgroup. You may be looking at people widely geographically dispersed, connected via private networks or over the Internet. Essentially the definition of workgroup computing, in terms of any technology boundaries, has pretty well changed."

Such responses highlight the broad and sweeping nature of workgroup computing — a sort of all things to all people, as it were.

So, let's narrow the focus. If we agree that groupware is the foundation of workgroup computing, then messaging is probably the driving force behind it. Messaging and groupware go together like ham and eggs in the workgroup computing world and no groupware application seems complete without messaging. "If you had a groupware solution without messaging integrated with it I wouldn't give it a lot of chance (to succeed)," said Marc LeBlanc, Canadian product manager for Lotus Development Canada Ltd.

When one thinks of groupware, three products come immediately to mind. Certainly Lotus Notes defined the market and remains the clear-cut leader. Novell's GroupWise is another heavyweight contender and, of course, there's Microsoft's Office 97 which has its roots as a desktop tool.

And even though the basic design of most groupware might look essentially the same, all are not created equally, nor are they necessarily conducive to workgroup computing between one another. It's not easy to communicate from one set of groupware tools to another, and virtually impossible to access the full breadth of functionality of, say Lotus Notes, from GroupWise.

Sloane explained that GroupWise is probably the most monolithic of the three products, boasting an incredibly capable package, "full of bells and whistles, but misses the boat from the perspective of having a product that can be sold separate from the client and server. If I'm going to run GroupWise, then everybody who I want to have participate needs to have the GroupWise client," Sloane said.

Likewise, Lotus Notes comes close to having a similar monolithic offering, but the company has the market share to succeed with such an approach, according to Sloane.

On the other hand, Microsoft only requires that its Office 97 runs on the client end and is less demanding about what server is running, he added.

Groupware's evolution can be traced back to three sources — E-mail, imaging workflow and desktop personal information managers (PIMs). The goal of all three was to make life better by helping people get organized.

PIMs promised to organize people personally, but that wasn't enough for true success, especially in a business environment, since it's necessary to organize the group in order to truly organize the individual.

E-mail evolved from an application that once included telephone notetaking, calendaring, scheduling and word processing, among other things.

Imaging workflow involved understanding what office clerks and other personnel did, then automating that process in order to make it faster and more efficient.

The complexity came about as a result of taking applications that were essentially end-user driven and attempting to drive them all from a common computing infrastructure that would allow a group to employ these calendars, schedulers and notetaking applications.

Schedules and PIMs are relatively simple applications as personal tools. Automating processes makes groupware a complicated thing, Sloane explained. "When you start talking about automating processes, you get wrapped up in a whole bunch of additional issues that aren't easily identified when you first get into it," he said. He cited "security, access rights, authorization and hierarchies of

Lotus's Mark LeBlanc said resellers have been c[illegible] to Notes

groups These all start getting into personal and often not well-documented areas of a company You take a process that seems relatively simple — I fill out an invoice and send it in — but when you try to automate it it becomes complicated Frequently people just don't realize how undisciplined their business processes are until they try to automate them"

Making it all work is where both the challenge and opportunities for value-added resellers reside Most customers don't have the in-house expertise to install and configure the kind of groupware system that can address their particular sets of business needs And the vendors who sell products like Notes GroupWise and Office 97 rely heavily on their VARs to make their groupware a fully functioning business tool

"Value-added providers are the key to our business and I think we're definitely going to do more to help value-added providers with their clients," said Anne McKeon, desktop application product manager for Microsoft Canada Inc

Lotus's LeBlanc was more blunt about the role of VARs "We would never be where we are today without the involvement of our business partners, resellers and VARs No way No chance in hell" LeBlanc said candidly When Notes was brought to the market, clearly this was not for the masses at the time It took a lot of expertise to be able to make this thing work There are many examples of implementations that have not gone well and in almost every single case, the main reason for the failures was a lack of involvement of a business partner," he added

"But when it has been run as a project, well-supported by business partners, the success rate is quite high"

Novell's Levy concurred and explained that the most successful GroupWise VARs are the ones who understand how to integrate new functions to a customer's environment "When you talk about collaborative products, the key is the applications," he said "As people upgrade their legacy systems they're looking to bring them into this collaborative framework From the VAR's point of view, (groupware) products are only the raw material tools to do that We see an endless wealth of opportunity for the VARs to show their expertise"

Everyone agrees the future of groupware will be shaped by the Internet and its ability to extend such products beyond internal corporate enterprises As LeBlanc explained, the promise of the Internet in a nutshell, is that "you can connect almost anybody very easily for cheap dollars and you can run some really good applications, again at a real cheap cost."

Aberdeen's Sloane said the Internet is changing the entire groupware market by forcing vendors to react to the technology and the market need He cited the example of how the Internet forced Lotus to reposition Notes, rename it Domino and unbundle "what had been a very monolithic product" into separate E-mail, Web server and groupware products

Finally Novell's Levy sees an additional key trend — the movement towards truly interoperable groupware Vendors will not have as much latitude to be proprietary about the extensions and enhancements they develop, he said. "These will come through standards filters because that's what the market will demand As for the question of whether it will happen five to 10 years from now, if I knew that then I'd start up my own company and get very rich" CCW

Dan McLean is a Toronto-based journalist who specializes in high-technology reporting

The Right Tool For the Job

A good application development toolkit can be a powerhouse in the hands of a knowledgeable reseller.

by Alan Thwaits

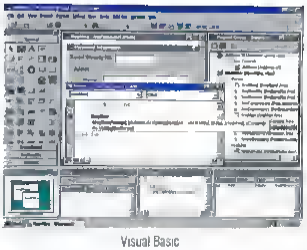
Like any good toolkit, application development tools can be used for more than one purpose. For some resellers, the enclosed tools may be the foundation for selling and supporting industry-standard and leading-edge software packages to their customers. For others, it may mean adding value to their products and services by using the same development tools to create custom software applications for clients.

In either case, resellers need to know where the market is active. High-end tools development is a busy place, because development tools are constantly changing to meet market and consumer needs.

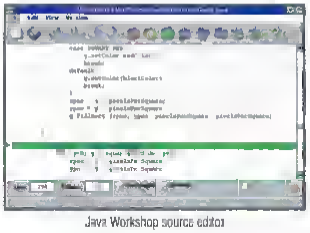
What's hot in application development? What can resellers in both camps expect to see coming down the tools turn-pike?

Object-oriented is the name of the game, and Java is the hottest thing on the planet right now, so it's natural that Java toolsets are front and foremost.

However, Microsoft, while offering development tools for Java, isn't letting the moss grow under Visual Basic and C++. And Borland, which once came close to dominating the developer applications market, is also marketing a new suite for Java database connectivity.



Visual Basic



Java Workshop source editor

Microsoft

At its Spring 1997 Developer Days events, Microsoft introduced the Enterprise Editions of Visual Studio 97, Visual Basic 5.0, and Visual C++. These packages provide the tools for designing and building multi-tier solutions that tap opportunities provided by the Internet, while integrating with existing hardware and software investments.

Visual Studio 97, the most complete tool offering of the three, integrates support for development teams, the design of large-scale solutions, and integration with large data stores. Visual SourceSafe 5.0, an enhanced version control and management system for software and Web site development projects, ensures that developers, Webmasters, and end-users can work together in the development project while protecting versions of code. Studio also supports Microsoft Repository 1.0, a database that resides on Microsoft Jet and Microsoft SQL Server that stores and shares development components between client and server environments.

And Studio's visual database tools support developers in integrating database development into a rapid application development (RAD) environment. Inclusion of Microsoft Transaction server delivers the ability to build server applications as single-user ActiveX components, and deploy them in Transaction Server as reliable multi-user applications, thereby masking the complexity of server programming from the component developer. More information about Visual Studio 97 is available at http://www.microsoft.com.

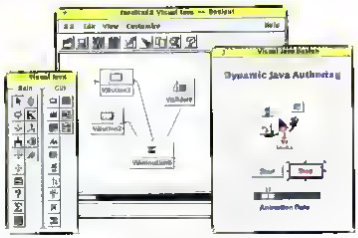
Sun Microsystems

Sun Microsystems offers a similar "family" of tools for Java software developers, comprising Java Workshop and Java Studio. (http://www.sun.com/workshop/java/ and http://www.sun.com/studio/index.html) Java Workshop Professional allows developers to create JavaBeans components, applets and applications complying to JDK 1.1 standards, plus a Web authoring environment for creating dynamic Web content. Java Studio is classed as a development environment, but has the ease-of-use of a desktop productivity tool, so is ideal for Web designers, content creators and others who lend their expertise to making Internet sites rich, compelling environments.

"Both Java Workshop and Java Studio are important for resellers because they offer the potential of going to other platforms, such as

Novell and HP," according to Jeff Anders, manager, workshop evangelism for Sun Microsystems. "That means that VARs and resellers are able to take the tools to platforms that Sun itself may not be supporting, and to make the porting of applications to those platforms much more effective."

Never one to be left behind on any front, Microsoft has announced the latest version of its toolset for the Java environment. Visual J++ 1.1, Professional Edition, includes a debugger that can debug applets inside a Web browser; what Microsoft claims is the world's fastest Java compiler, a full-featured and customizable editor, and print and on-line documentation. What's new in Version 1.1 are a Database Wizard for creating applets that connect to ODBC compliant databases on any platform, an ActiveX Wizard that developers can use to create ActiveX components that can be reused in such applications as VB, PowerBuilder, Delphi, Visual C++, and Excel, and enhancements to Integrated Developer Environment (IDE) set in the Developer Studio visual development system.



Java Studio

More information on Visual J++ can be found at http://www.microsoft.com/visualj/

Borland

More recently, industry stalwart Borland announced its contribution to the Java arena. According to Borland, JBuilder Standard, Builder Professional, and JBuilder Client/Server feature "the industry's fastest and easiest" JavaBean component creation, a scalable database architecture, and robust visual development tools. Borland emphasizes that JBuilder is designed for all levels of development projects, ranging from applets and applications that require networked database connectivity, to client/server and enterprise-wide distributed multi-tier computing solutions. JBuilder also provides developers with a flexible open architecture, so that users can incorporate third-party tools, add-ins, and JavaBean components.

One of JBuilder's assets is BeansExpress, which helps developers increase productivity by encouraging component reuse. With BeansExpress, developers can build JDK 1.1-compliant JavaBean components, as well as deploying their JavaBeans and adding them to JBuilder's component palette. JBuilder Professional and Client/Server ship with more than 100 reusable JavaBeans for GUI design, Internet development, and database access (including source code for these components).

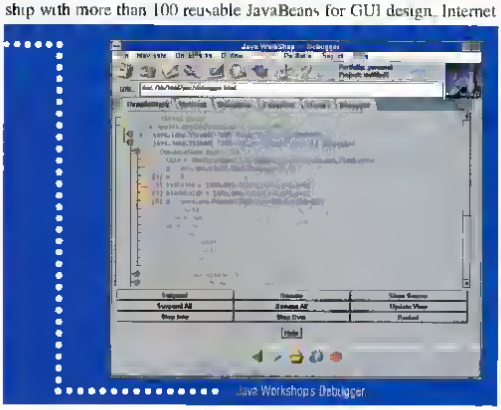
JBuilder features a new, scalable database architecture called DataExpress, providing developers with flexible, drag-and-drop data-aware components and design tools to build applications and applets using JDBC database connectivity. Borland's reputation for offering "industrial strength" programming environments and languages shows in the tools and capabilities offered in the JBuilder family.

Prominent among these are the Borland RAD Workbench, a professional-level IDE common to all of Borland's visual development tools, Productivity Wizards, and a Local Interbase Server and Borland SQL Server Tools for building, managing, and deploying scalable databases server applications.

More information about JBuilder can be found at http://www.borland.com/jbuilder/

The good news is that the applications development toolkits are out there — each one of them a powerhouse in its own right. For resellers who can configure the toolkits to be productive components of their marketing strategies, the news can only get better and better.

Alan Thwaits is a freelance journalist who specializes in on-line and mobile computing technologies. He can be reached at praxcomm@idirect.com.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Beginners in Visual Basic, should check this out!

by Stephen Ibaraki

Title: *Teach Yourself Visual Basic 5 in 21 Days*
Authors: Nathan Gurewich, Ori Gurewich
Publisher: SAMS Publishing
ISBN: 0-672-30978-5
Content: 738 pages
Level: Beginner to Intermediate
Description: In 21 days, the book provides a good, quick, "general" foundation in Visual Basic 5 programming that's stronger than the "Dummy" series in technical content. Commercial programmers will need to study specialty books to gain mastery of any topic area.
Rating: B+ — Recommended for the beginner

Visual Basic is the industry's leading programming language — outselling all others combined. And for those new to this dynamic language, a good tutorial is certainly necessary.

As a college educator, I have used countless textbooks to teach Visual Basic, but it was not until we implemented *Teach Yourself Visual Basic 3 in 21 Days* that we experienced real success. Now with Visual Basic 5 (VB5), this updated and revised best-seller will continue to be the recommended textbook for our introductory VB5 programming courses. All the examples reflect the new VB5 interface, although the style, flow and content strongly show the book's roots from prior editions.

Is it truly realistic to complete the study in 21 days? Actually, with dedication, the reader can finish the book in seven days. That's a minimal time investment to gain an quick introduction to this exciting programming language. For the neophyte, the amount of required study time will vary from 14 to 21 days.

The book splits into three weeks with each week divided into seven days. The first week is the introduction and lays the foundation for the language. On Days One to Three, your customers will be writing their first program, learning the basic controls and their properties, and using programming elements like IF statements and LOOPS. Coverage of the mouse follows on Day Four, menus on Day Five, dialog boxes and graphics are on Days Six and Seven. Any C/C++ programmer will appreciate the elegance and speed of program development. Weeks of coding are no longer necessary.

The second week continues with graphical methods allowing the creation of impressive visual effects in minutes. On Day Nine, the reader will easily program tabular displays with the spreadsheet-like grid control. Font control for both the screen and printer are detailed on Day 10. With Day 11, the programmer learns the ease with which VB5 handles the cutting, copying, and pasting of text and graphics. Day 12 focuses on interfacing with the keyboard, detecting and intercepting specific keystrokes to control program execution. On Days 13 and 14, the reader works with using and accessing the file-system.

The last week is the most important. The students not only gets an opportunity to put everything into use but, as in the words of the authors, the book covers "the most sophisticated features of Visual Basic — features that make it famous."

Day 15 includes good coverage of arrays and Visual Basic's unique ability to re-dimension dynamic arrays. Essential topics detailing with "passing by reference" will heighten the interest of experienced C/C++ programmers. The section on Object Linking and Embedding (OLE) is merely an overview — so if that's a main interest, look elsewhere beyond the coverage in this book.

Day 16 provides a passable discussion of the data control and SQL though the coverage is too light to help the reader build any "real" applications. On Days 17 and 18, the reader learns to write programs to support the multiple document interface or MDI, and to pass messages from one application to another.

Days 19 to 21 and the appendix introduce extremely powerful features, some unique to Version 5 of Visual Basic. Your customers will read about technologies such as DirectDraw, 3-D virtual reality, DirectSound and custom properties. They can write programs using API functions, and create OCX ActiveX controls. To build mastery of these areas will require texts that are more advanced.

Of course, there could be improvements in this offering. It would be nice to see an enclosed CD-ROM with sample code and controls. This would follow the standard for most books of this "self-study" breed. In-depth treatment of advanced topics would be a welcome addition, especially for professional programmers. For example, OLE receives only a cursory treatment. Data Access Object programming isn't even mentioned, data-bound controls are barely covered, and the API examples are simplistic. If your goal or that of your customer is Microsoft certification, the coverage is too narrow.

The book is ideal for a quick (and dirty) introduction to Visual Basic 5. For the serious developer, the book doesn't go far enough or provide pointers for further research, and this would be its most serious shortcoming. CCW

Stephen Ibaraki, ISP, is co-convenor of the BADM Computing Program at Capilano College, which is CIPS, Novell, Microsoft-certified. He can be reached at sibaraki@capcollege.bc.ca

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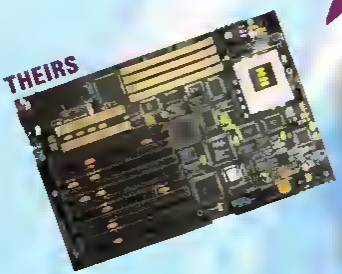

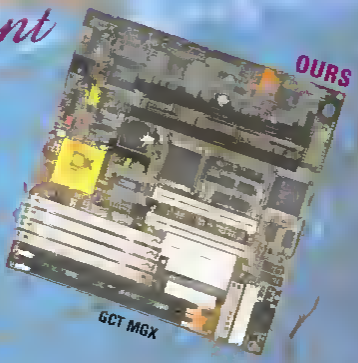

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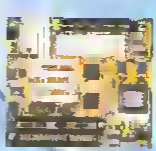

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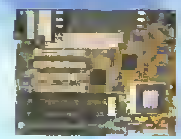

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DVD: It's Time To Pay Attention!

Your customers will soon be clamoring for DVD systems as the massive storage medium will enable new applications for home and business.

By Geof Wheelwright

Digital Video Disc (DVD) has the promise to deliver a huge marketing opportunity to dealers and resellers over the next year, but few in the PC industry seem to be talking about it.

However, DVD is a vast improvement over the existing humble CD-ROM drive that should send users scurrying to get their systems upgraded. To get an idea of the difference this will make to software, consider the announcement last year by the American company Digital Directory Assistance Inc., which currently publishes the popular PhoneDisc CD-ROMs telephone directories.

The company's existing PowerFinder USA One product takes up 3.7GB of data sold on six CD-ROMs. The company says that with the capacity offered by the extra capacity on these new DVD players, the combined contents of all of PhoneDisc's six CDs can be placed on a single DVD-ROM disc, with room to spare.

"DVD ROM technology allows our users to search all 112 million business and residential telephone listings with U.S. Census demographics seamlessly, using a single disc," says the company's chief executive officer Claude Schoch. "Once you experience the DVD-ROM version, it's hard to go back to switching through six CD-ROMs."

Meanwhile, Sony of Canada Ltd. offers a "reference-standard" CD/DVD video player, plus DVD-ROM drives for personal computer and high quality movie and music entertainment programs targeted at video and audiophiles. "At Sony, we are committed company-wide to DVD," said Ted Miyashita, the senior vice-president of the consumer electronics group at Sony of Canada.

Sony's first DVD video player is the model DVP-S7000, available for less than $1,399. In addition, Sony has already started to ship sample units of its DVD-ROM drive to U.S. personal computer manufacturers for testing.

Sony appears to realize, however, that it will be the availability of content in DVD format that will make or break this standard. In anticipation of consumer demand for DVD titles, the company has established "DVD Authoring Centres" in Japan and at Sony Pictures' Culver City studios, in California. The Culver City facility, in particular, is aimed at bringing the film-making community (including Sony Pictures Entertainment, of course) into the DVD world.

Meanwhile, Warner Home Video (WHV), began offering its first DVD titles beginning this spring. Released simultaneously with VHS, WHV suggests that its movies on DVD are being offered "at affordable sell-through prices" that it predicts will prove instrumental in popularizing the DVD format. Titles scheduled for March include *"Space Jam"* and *"Twister"* with future releases such as *"Sleepers,"* *"Michael Collins,"* and *"Mars Attacks!"*

For most PC users, however, the choice will not be to junk their existing PC and CD-ROM drive. Many will want to upgrade and add DVD to their current systems. So there is likely to be a huge potential for upgrades of existing PC CD-ROM drives, as well as a mass "upselling" move driven by both the arrival of DVD and Intel's MMX multimedia processor technology.

DVD promises to be able to store up to 17GB of data on a single CD-sized disc, and still be able to play all existing CD music and CD-ROM discs. Creative says its recently-announced DVD upgrade is initially targeted at power gamers, multimedia enthusiasts and early adopters. "We see PC-DVD as the media rich solution that serves as the catalyst to take the PC into the family room and make it part of the entertainment centre," explained Hock Leow, vice-president of Creative's multimedia division.

Inside the Creative $499 upgrade kit, Leow says the company is offering a PC-DVD drive that reads DVD-ROMs at 9X speed and CD-ROMs at 6X speed, as well as built-in Dolby Digital (AC-3) audio and MPEG-2 video decoder boards (apparently providing better sound and the ability to play MPEG-2 video of 135 minutes in length).

Creative further says that the drive will be able to read up to 8.5GB of data or information on each side of a single DVD-ROM disk and supports existing CD-ROM, CD-Audio, Video CD, CD-Extra and CD-I formats.

The announcement of the drive appears to have other sectors of the industry excited as well. "We believe that DVD represents the next major step in audio and video storage technology for the PC," offered Intel content group vice president Claude Leglise.

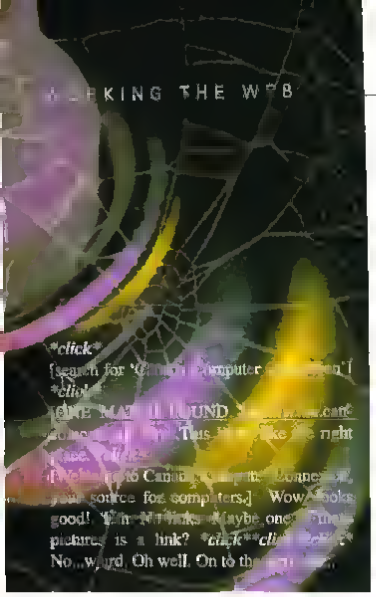
Analysts have also been fulsome in their praise of the technology. "The DVD market is poised to ramp up very quickly — even more so than CD-ROM — and add tremendous value to the user," suggested Tim Bajarin, president of Creative Strategies, a market research firm located in San Jose, Calif. "The expanded functionality of DVD for the PC includes entertainment media such as full-length movies, educational content and arcade quality games."

DVD will also not be limited to devices that can read pre-authored discs. Enter the DVD-RAM drive. In late April, Hitachi America Ltd. announced that it would start shipping samples of the GF-1000 family, one of the world's first DVD-RAM drives for personal computers, on June 20. Hitachi says the new drive, which allows both recording and playback of data, complies with the DVD-RAM format announced in late April by the DVD Forum.

DVD-RAM is a rewriteable DVD format that offers a storage capacity of 5.2GB (equivalent to 3,600 floppy disks) using both sides of a five-inch disk. Hitachi says it offers full compatibility with other DVD formats and very high reliability in the reading and writing of data. The Hitachi GF-1000 range consists of three members: the GF-1000 (which has an ATAPI interface), and the GF-1050 and GF-1055, both of which have a SCSI interface. The GF-1000 and GF-1050 are internal DVD-RAM drives, and the GF-1055 is an external DVD-RAM drive.

By the year 2000, Hitachi says it expects that the global market for DVD drives will be more than 70 million units, and that 30 million of those units will be DVD-RAM drives. CW

Geof Wheelwright is a Vancouver-based technology and business journalist. He can be reached at geofwheelwright@msn.com.



Getting Your Database On-Line

For you and your customers, it may be time to get past that "on-line" brochure stage, and get some real useful product data out on the Web.

by Sean Carruthers

In the end, it doesn't matter how good a site looks, if there's nothing there to look at. Once you or your customers decide to create a company presence on the Web, it's time to decide what is going to be featured on the site, and the best way to get it there.

This can depend on the level of expertise of the people creating the Web site, the amount of money you want to invest, the amount of flexibility you need, and whether the site will be for informational purposes or commerce.

Armstrong Web Production

The first way, let's call it the 'Armstrong' method, is essentially sitting down with the materials at hand and assembling the site piece-by-piece. Using a text editor or an HTML authoring kit, one would start the rather tedious process of mapping out a series of links, entering text, putting the pictures in place, determining what pages are going to contain what, if there will be any repetition of items from category to category.

For example, will the Printers page contain printer cartridges, or will those go solely on the Supplies page? It's important to know what's going to go where, in advance.

This method of Web site assembly obviously works best for small sites, or sites that will only be featuring a limited representation of overall stock. The advantage, for small sites, is that it's fairly inexpensive, once all the necessary information is gathered together and entered and the scanning/creation of the graphics done. The down side is that it can be rather labor-intensive and tedious, and whenever updates are made to general stock, all affected areas on the Web site will have to be changed manually.

Incorporate An Existing Company Database

The second method is to incorporate an already-existing database, either by making a copy onto the Web server, or by giving the Web server access to the database on the point-of-sale machine. Instead of a batch of firm Web pages with specific information hard-wired into them, this approach would allow more flexibility, inserting appropriate items into a framework page, though scripting.

Both Java and CGI scripting are in common use, and are popular for creating dynamic Web pages, on the fly. Accessing a certain Web page would invoke a script, which in turn would search your database for appropriately flagged items, and insert them on demand into the text of a Web page.

As an example, printer-related entries could be flagged with a 'p', 'm' for modem queries, and 's' for supplies. A modem cable flagged with 'ms' would be relevant to both supplies and modem queries, and would be brought up on both pages. In addition, anything added to the database with appropriate flagging would be brought up on subsequent relevant searches. Instead of updating the database and then the Web pages on top of that, all that would be required would be the updating of the database itself.

While it's theoretically possible to have the Web server interact directly with the active point-of-sale database, it may not be the best option in all circumstances, mostly for security concerns. With a point-of-sale machine directly connected to the Internet, the possibilities of mischief from outside increase, and this can become a much larger concern if any confidential information (credit card numbers, customer records) are entering the point-of-sale machine or passing from the point-of-sale machine to the Web server.

The major drawback to this method is the need for knowledge of scripting and implementation. Java and Perl (which is often used to create CGI scripts) are generally easier languages to learn and implement than professional programming languages such as C++. However, if there's no time to personally learn them and put them to use, outside help may need to be brought in to make everything work together. If a lot of work is required to link a database to Web pages through scripting, it can become a time-consuming, frustrating, and expensive proposition.

'On-line Store' Packaged Software

A third option is software specifically dedicated to Internet sales, like Microsoft's Merchant Server package, which merges a SQL database server with HTML templates, and a grab-bag of tools dedicated to database and Web construction. Packages like this are for professional developers although they provide everything necessary to put together a Web-based database and the associated pages, most are still not trivial to operate, require extensive work and maintenance, and a prior knowledge of systems and the Web.

Although there are other products for the beginner which are a bit simpler, where one can just plug information and go, lack of flexibility of such systems could be problematic.

The price tag for some of the dedicated 'on-line store' software seems astronomical at first, sometimes commanding tens of thousands of dollars before you even take the actual hardware into account. However, after considering the amount of time and money that can be invested in incorporating an existing database, after scripting and tech support, dedicated software may come up even, or even be less expensive in the long run. Certain packages are also available which have most of the features and power of more expensive dedicated software, but at a lower cost (Intershop Online is one example, at http://www.intershop.com.)

When trying to decide your approach, consider: What is the purpose of the Web site? Will it be to dispense a limited amount of information? Will it be used to provide a full reference of stock carried? Or will it be an actual on-line store?

Although simply establishing a Web presence can be a good thing, getting more information on-line about the stock you carry will allow the Web site to function as more than just a cyber business card. CCW

Sean Carruthers does Web consulting for Armchair Airlines Computer Services (http://www.armchairmb.ca) in Brandon, Man. He can be reached at oneiros@armchairmb.ca.

Could A Trust Benefit You?

Resellers can potentially pay less tax and maximize revenues, by properly employing a trust.

by Douglas Gray

You have probably heard of the concept of trusts — sometimes referred to as family trusts, private trusts or corporate trusts. There are also offshore trusts. Generally there is a mystique about the concept of trusts, and a lot of confusion about what they are and when they should be considered.

Many people think trusts are just for the rich or for people with complex financial and investment affairs. That is not the case at all.

Trusts are a very common way of dealing with a range of personal choice, family or business options. As a reseller, you want to maximize your after-tax revenue and minimize the tax you pay on your investments. Basically a trust is a legal structure whereby a trustee deals with property or assets, such as cash, stocks or bonds, over which the trustee has control, for the benefit of persons called beneficiaries. The trustee could also be one of the beneficiaries. Although the trustee has legal title to the trust property, beneficial ownership rests with the beneficiaries.

There are two main types of trusts: Living trusts and testamentary trusts. A living trust (also referred to as 'inter vivos' trust) is established while an individual is alive, and comes into effect once the trust agreement is signed and the trust is funded. A testamentary trust is created under the terms of a person's will and therefore takes life on the person's death. It is funded from the proceeds of the deceased's estate. These trusts serve different purposes and objectives and can have different tax implications.

Living Trusts

Here is an overview of how trusts can be used in connection with your business. For example, there are a number of creative ways that you can use a living trust.

'You could have some of the shares in a company owned by a spouse held in the name of a family trust.'

Family Trust.

In this situation, you could have some of the shares in a company owned by a spouse held in the name of a family trust. These shares could be non-voting shares. This family trust could be comprised of the other spouse and children. If it is structured the correct way, the monies that would go to the trust by means of dividends could then be distributed by means of dividends to each of the members of the trust.

If the members of the trust were not receiving any other income, they could each take out $23,756 of dividend income each year, tax-free. If the family members were minors, the attribution rule would not apply, if the trust was formed properly. That is, the normal Revenue Canada policy of attributing income in a minor to the parents for tax purposes, would not be applicable.

Estate Freeze

If you own a company or have other assets that have shown a consistent pattern of growth over a period of time, and you anticipate that that trend will continue — an estate freeze using a corporation set up for the purpose, along with a living trust agreement, could be an effective strategy to consider. The practical effect of this technique is to freeze the value of the assets in your name as of the effective date of the agreement. All future capital gains will accrue to the benefit of your beneficiaries, such as your children.

There are many other uses of a living trust, including supporting your children, providing for family members with special needs, divorce settlements, looking after your financial needs in your retirement, avoiding probate and ensuring the confidentiality of your wishes.

Testamentary Trusts

There are a range of uses for this type of trust. As mentioned earlier, these trusts are included in your will. Common options include the spousal trust, trusts set up for minor children or grandchildren, providing for family members with special needs, discretionary trusts for children who are spendthrifts, and gifts for charities. Here is an example:

Spousal Trust

In this situation, you set up a trust to provide income for the life of your spouse, with the capital remaining at death to go to the children or grandchildren.

This type of trust is common when a spouse is ill or incapacitated or lacks financial expertise. A variation of this format, if there are no children or grandchildren, is to leave the capital to charity, on the death of the surviving spouse.

The selection of a trustee is a critically important part of the process. Many people use a trust company as the trustee or co-trustee. Because of the legal and tax implications of setting up a trust agreement correctly, you want to obtain expert advice from a tax accountant and lawyer who deals in wills and estate matters. CCW

Douglas Gray, LL.B., is a Vancouver-based lawyer by training, speaker, columnist and author of 15 bestselling books, plus a real estate investment software program. His books include The Complete Canadian Small Business Guide, Home Inc.: The Canadian Home-Based Business Guide (both by McGraw-Hill Ryerson), Start and Run a Profitable Consulting Business, and Marketing Your Product (both by Self-Counsel Press).

by Newsbytes

New Japanese version of Quick View Plus released

Inso Corp has announced the release of a Japanese version of its Quick View Plus 4.1 software. The software enables users to view, copy, and print fully formatted files from more than 25 Japanese and more than 200 U.S. file formats from within E-mail systems and browsers. It also lets end-users search for text, zoom and rotate graphics, and view, decompress and save files from supported archives.

Nokia to expand the Zhejiang GSM network in China

Nokia has signed an agreement with the Zhejiang Posts and Telecommunications Administration for the third phase of an expansion of the Chinese province's GSM 900 network. The New Century Group reported the contract is valued at US$80 million.

Under the terms of the agreement, Nokia will deliver high capacity mobile switching centers, home location registers, base stations and a comprehensive network management system.

The agreement also includes expansions to the existing network.

Sony launches Trinitron monitor with TV tuner

Sony Corp. has introduced a new computer monitor (based on its Trinitron picture tube) that includes a TV tuner.

The 17-inch monitor means the overhead related to running a TV tuner card, and the image processing required inside a computer, disappears because the hardware board inside the monitor takes care of TV images.

Rather than being a television with the ability to display computer images, the device is much nearer a computer monitor with a TV tuner. It can display signals with horizontal scanning frequency of 30KHz to 70KHz and automatically adjusts depending on the signal input.

The CPD-17MS is available in Japan for a list price of US$1,079.

Compaq creates Chinese unit as separate geographic division

Demonstrating its continued expansion in the Asia-Pacific region, Compaq has established the Greater China Region (including China, Hong Kong and Taiwan) as a separate geographic division.

Philip Yu has been appointed president of the Greater China Region. Yu will be responsible for overseeing sales, marketing, service and support, and manufacturing operations.

Compaq opened a manufacturing facility in Shenzhen, China, in 1994.

Japanese police study Internet porn laws

The National Police Agency (NPA) began studying a revision to the law which could result in a clamp-down of pornography on the Japanese Internet, reports the *Kyodo News Service*.

It said the NPA will include pornographic Web sites in the agenda of a new research panel that will look at amending the law regulating adult entertainment businesses.

The panel is made up of lawyers and university professors, said *Kyodo*. Results are due within a year of the beginning of the police studies, which will also look at regulations surrounding the legality of, so called "date-clubs" and advertising flyers for companies involved in the sex industry.

Japan currently has no laws specifically covering pornography on the Internet and there are many adult Web sites operating.

Toshiba, Sandisk sign cross-licensing deal for flash memory product patents

Toshiba Corp. and Sandisk Corp. say they have signed a cross-licensing agreement for flash memory related patents. The deal gives the companies access to each other's patents covering design and manufacture of flash memory products.

The agreement includes the right to use the patented information worldwide.

No further details of the agreement were released, with each company citing confidentiality.

Eli Harari, Sandisk president and chief executive officer, said: "We are very happy to announce this patent cross-license agreement between Toshiba and Sandisk.

Both companies have pioneered the emerging markets for flash data storage. This agreement will accelerate the market development." CCW

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Breaking In Is Hard To Do

Cloners try to make a dent in Intel's CPU sales

by Alan Zisman

The race to provide the processors for the computers you sell is suddenly hot

Of course, Intel Corp has held the stranglehold on this market, defining the product category, and providing the vast majority of these Central Processing Units (CPUs), which act as the 'brains' of our computers But let's look closely at the challengers to Intel's dominance in what is now an annual US$18 billion market. A couple of years ago, it looked as if Intel and its nearly 20-year-old 80x86 line of CPUs might be facing strong challenges from various directions

PowerPC

The PowerPC processor originated from an IBM design, is manufactured by Motorola and is in use throughout Apple's PowerMac line With Microsoft's Windows NT being ported to run on the PowerPC, this appeared to hold a lot of potential, as the CPU itself offered more power in a smaller, less expensive package than Intel's equivalents

While the PowerPC has been a clear winner for Apple, it hasn't managed to make much of a dent in Intel's traditional markets. PowerPC-powered machines from IBM and Motorola, running NT or Unix, suffered from low sales, while delays in Apple's PowerPC platform specifications have made it impossible for cloners to create boxes that could dual-boot between the Mac and NT operating systems. NT 4.0 is still available in a PowerPC version, but low sales have led Microsoft to announce that the operating system won't be upgraded beyond that version

RISC Processors

Versions of NT were also created for MIPS processors running in NEC workstations and Digital Alpha processors in machines from Digital Equipment Corp and several clone companies Again, sales have not been dramatic. As a result, NT for MIPS has also been cancelled (though a version of the MIPS chip powers the wildly popular Nintendo-64 game station) DEC soldiers on, and its 433MHz and 500MHz Alphas are some of the fastest desktop machines available — and at relatively affordable prices The upcoming releases of Microsoft Word and Excel for NT-Alpha will make that processor the fastest way to run a word processor (as long as your typing speed improves!)

Intel Cloners/Competitors

AMD and Cyrix have both been in business for a number of years, typically cloning Intel's last generation model, selling product for the low-end of the market Now, however, they're challenging Intel on the high-performance end as well, with a pair of attractively performing models at attractive prices

In many ways, AMD's K6 and Cyrix's 6x86MX (aka M2) processors are more alike than different Both, for example, have successfully cloned Intel's instruction set, including the 57 new MMX multimedia extensions Machines built around either chip happily run pretty much any software that runs on real Intel machines, operating systems like Windows 95 or NT, applications, games, and what-have-you

Both provide more power than Intel's MMX Pentiums, and either will do a better job of running the 16-bit code in Windows 95 than Intel's Pentium Pro processors While neither is quite as fast or as powerful as Intel's latest Pentium II powerhouse, they're both competitive with it, and at lower price points (Both companies offer chips that they claim as equivalent to Intel models running at speeds from 166MHz to 233MHz)

Both share the same major difference from Intel's Pentium II With that model, Intel is trying to force a major redesign of motherboards Earlier motherboards typically accommodated the CPU in a socket directly on the motherboard surface The Pentium II is built in a special card that includes the CPU, support chips, and high speed cache RAM The card requires a dedicated slot, referred to as a Slot 1 design Motherboards built for Pentium II processors require extensive redesign along with licensing fees to Intel

Both AMD and Cyrix's new models, however, are built to fit into the widely used Socket 7 — originally designed for the Pentium So existing motherboard designs, already built around the Socket 7, can be modified easily (and cheaply) to work with these new models But Intel has cut prices (with more price cuts promised throughout the rest of the year)

To date, AMD has a big contract with Digital for its Venturis line of (non-Alpha) PCs, and with Hewlett-Packard, which is shipping AMD's last-generation K5 processor in several of its lower-priced models

Cyrix has managed to get its 6x86MX chip into a number of U S clone models, but the processor has had little impact so far on the Canadian market Compaq is using Cyrix's lower-powered MediaGX in its Presario 2100 model, aimed at the home market The MediaGX, while in many ways a turbo-charged 486, includes video and sound support. This means traditional video and sound cards are unnecessary, and makes this an attractive choice for models aiming at the $1,000 price point

AMD and Cyrix are each aiming to sell one million CPUs by year-end, which would still leave Intel inside the vast majority of computers sold And none of the companies are standing still AMD, for example is expected to release 266MHz and 300MHz models of the K6 before year's end As well, the company is planning a K6 version aimed at mobile computers Cyrix's 6x86MX already works at dual-voltages The lower voltage setting saves power in battery-powered machines, and may be the most attractive current offering for mobile models

Next month — the Intel empire strikes back

Alan Zisman is a computer journalist and teacher living in Vancouver He can be reached at a_zisman@cyberstore ca

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Hardware Focus: Input Devices

Software Focus: Educational/ Edutainment Software

Lab: Home Computers

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new PRODUCTS

Adobe advances document 'repurposing' software

Adobe, software pioneer in desktop publishing in personal computers, has announced a new version of its FrameMaker document publishing software, a program designed to allow users to 'repurpose' documents so that they can be published in a variety of media, including hard copy (paper) or on the Web.

FrameMaker 5.5 employs Smart Document architecture to keep layout instructions and content (such as raw text and graphics) separate, enabling easy user control of layout throughout an entire document. Changes can be made globally and instantly with a single mouse click. FrameMaker aims to make many of the common and repetitious aspects of publishing automatic, enabling simple revisions, updates and cross references. The new version of FrameMaker is also optimized for collaborative publishing — allowing several co-workers to make additions, deletions and modifications to a document, while ensuring that all other contributors know what changes are being proposed and allowing changes to be undone if necessary. FrameMaker documents can be distributed in the Adobe Acrobat (PDF) format or HTML, or, with the use of FrameMaker+SGML 5.5, in the SGML document format. In terms of input types and features, some of the most noteworthy new ones include context sensitive menus, table sorting and exporting, character level language definition, and improved import and export filters.

For more information, contact http://www.adobe.com.

QDI adds motherboards

Quantum Designs Ltd. has announced the release of its Legend Series of motherboards that use Intel's Pentium II 440LX chipset.

The chipset includes the Accelerated Graphics Port (AGP) technology and has boosted the bus speed for graphics transmission by four times compared to the PCI slot — from 33MHz to 133MHz, says Quantum.

For more information, telephone (905) 940-3827.

Matrox and in:sync combine to offer digital video

At the recent Siggraph 97 show in Las Vegas, Montreal-based Matrox Video Products Group and in:sync Corp. announced a new video production and editing system based on the in:sync Speed Razor software and the Matrox DigiSuite PCI card hardware.

Matrox DigiSuite

According to Alain Legault, vice-president of product development of Matrox Video Products Group, "The unique in:sync Speed Razor architecture allows Matrox to design plug-ins that fully exploit the advanced features of our hardware. The version 4.0RT of Speed Razor is a very powerful editing solution, and as we move forward in our collaboration with in:sync, even more features of the DigiSuite hardware will be exposed to Speed Razor users." The Matrox hardware allows PC users to capture uncompressed D1 digital video with 48KHz DAT audio, and using the in:sync software, to perform professional editing operations such as real-time A/B roll, over-100 wipe and transition effects, plus graphics editing. The Matrox DigiSuite with the in:sync Speed Razor is sold through professional video/multimedia dealers, and the complete system, including the two PCI bus cards, audio and video breakout boxes and software has a suggested list of $9,995.

For more information, contact http://www.in-sync.com, or http://www.matrox.com/video.

CompuTrace and McAfee shut down notebook thieves

It isn't nice to have your computer stolen, but it would be some consolation if the computer at least made an effort to escape from the thieves. This scenario is actually a lot more likely than it sounds, due to a recently announced alliance between Absolute Software, the publishers of CompuTrace "undetectable" anti-theft software, and McAfee, the well-known makers of security management and anti-virus software.

CompuTrace is a program designed to reside invisibly in the background on a computer, periodically logging in to a monitoring service. If the computer is stolen, the owner reports the theft to the CompuTrace monitoring service. The next time the PC is turned on, with a working modem installed, CompuTrace will make a call to the monitoring service, unknown to the user, and report its location. The police will then be informed.

According to CompuTrace, a Canadian tour consultant who had her notebook stolen while working rock concert recovered it when the system called in after the theft. The CompuTrace software costs $29.95, plus a $60 annual monitoring fee. For more information, contact http://www.computrace.com or 1-800-220-0733.

Call waiting on the Web from Brampton's InfoInterActive

Brampton, Ont.-based InfoInterActive (http://www.interactive.ca) is marketing its new Internet Call Manager, or as the company calls it, "visual call waiting for the Internet."

Basically, the service, at $4.99 per month, allows home users with one phone line to stay connected, without missing a call. Users must also subscribe to Caller ID, from their local phone company. When a user is on the Internet and a phone call is received, a notification box including the caller's name and number is presented on the screen. The user then has a variety of options, (although they vary slightly, depending on services supported by the regional phone company), including taking the call, sending a voice message over the phone line advising the caller to call back later, telling the caller that the user has their number and will call them back shortly, or pushing the call through to voice mail.

Digital Equipment ships high-end executive notebook

Aimed at the very high-end of the market are Digital Equipment of Canada Ltd.'s latest additions to the HiNote Ultra 2000 series of notebooks.

The emphasis with the Digital HiNote Ultra 2000 GTX 5166M and VTX 5166M is on serious technology in an ultra-portable package.

The Digital HiNote Ultra 2000 offers 12.1-inch and 14.1-inch screens with starting weights of about five pounds, and a height of 1.25 inches.

The systems offer Windows 95 and Windows NT Workstation 4.0 with enhanced power management. Also included are a 20X CD-ROM drive, a "hot swappable" CD-ROM/diskette drive, and a 56Kbps integrated modem.

Estimated street prices for the Digital HiNote Ultra 2000 series will range from US$4,999 to US$5,999. The Digital HiNote Ultra Multimedia Dock and the Digital HiNote Ultra Enhanced Port Replicator are priced at US$899 and US$379, respectively.

Security — at your fingertips!

Ottawa-based American Biometric Company (ABC) has just started mass production and shipment of its BioMouse, a US$299 fingerprint recognition system for PCs and workstations which, according to the company, sets a new benchmark for price performance in biometric security technology.

The BioMouse looks a bit like a regular computer mouse inflated with helium. It has a little pink button on one end, where the user applies a fingerprint for scanning.

The BioMouse connects to the parallel port of any PC or (with an adapter) a Sun or Silicon Graphics workstation, and offers full parallel pass-through, as well as using an external power supply. A PC Card version for notebooks is expected in 1998. In the meantime, notebook users will need access to a power source for authentication.

BioMouse software is available for current versions of Windows and Windows NT, as well as several varieties of UNIX. A Mac OS version of the BioMouse software is intended for release in Q4 1997.

Once the fingerprint recognition software is loaded onto a computer, the user is prompted to enter a fingerprint scan as a password. From then on, every time a would-be user wants to log on to a computer they will be asked to enter a fingerprint. The BioMouse scanner attached to the computer will scan the offered finger, and compare it to an encrypted template of the fingerprint which has been previously entered into a fingerprint database.

The company is now looking for distributors and VARs. Visit http://www.abio.com, or call 1-800-579-5438.

Trinity ships TV studio in a box at Siggraph 97 show

Trinity

After years of intensive R&D, Play Inc. announced at the Siggraph 97 exhibition that it is now shipping its long-awaited Trinity digital video production system.

Trinity is a hardware and software system designed to allow users to perform a wide range of broadcast quality digital video production operations with the aid of a PC. It is essentially a large metal chassis containing a motherboard with a host of expansion slots. The base system comes with a digital switcher that can mix up to eight live video feeds, a chroma keyer for overlaying video and graphics, real-time organic wipes, animated custom 3D effects, linear and non-linear editing, a character generator, paint, animation compositing, and a twin-channel still store.

Additional equipment required would include a Pentium PC as the host controller, and video tape recorders for source and recording.

Play is a company largely composed of former Amiga computer video developers, including several key developers of the famous NewTek Video Toaster. For more information, contact http://www.play.com or 1-800-306-7529.

Smart intros giant rear projection touch-sensitive panel

Smart Technologies has announced the Smart Board RPSB 720, a 72 inch rear projection touch-sensitive screen. The RPSB 720 is an interactive electronic whiteboard which can be used in a teaching or collaborative work environment as a writing surface at the user's site, while it also transmits the user's diagrams and writing over a network to be viewed by colleagues in remote locations.

A Windows or Mac computer screen display can be projected on the whiteboard screen, and the user can interact with the software applications visible on the screen by simply pointing and pressing with a fingertip to activate menus, icons and window options. A stylus can be used to "write" electronic notations onto the computer screen.

According to Nancy Knowlton, executive vice-president of Calgary-based Smart Technologies, "Effective collaboration means teams need to be able to conveniently access and work with, information stored in a variety of media format.

"An open system such as the Rear Projection SMART Board 720 is ideal for workgroups because they can integrate their existing resources into the unit, then interact with the materials from a large touch sensitive screen." The RPSB 720 has a suggested retail price of about $20,000.

Visit http://www.smarttech.com or telephone (403) 245-0333.

Compaq Canada releases Armada 7300 notebook line

(NB) — Compaq Canada Inc. has announced the Armada 7300 notebook line. Canadian list prices for the new lightweight notebooks are $6,450 for the Armada 7330T with 150MHz Pentium, 2.1GB hard disk, 16MB of memory, a 12.1-inch 800 by 600 display, and lithium ion battery, and $7,288 for the Armada 7350MT with 166MHz Pentium, 2.1GB hard disk, 32MB memory, 12.1-inch 800 by 600 display, 33.6Kbps telephony modem and lithium ion battery.

Call 1-800-567-1616 for more information.

Lexmark ships sub-$200 color ink-jet for home and education

Lexmark Canada Inc. has begun quantity shipment of its new 600 dpi Lexmark 1000 color ink-jet printer aimed at the home and educational markets.

According to Marty Grieve, director of the consumer printer division of Lexmark Canada, "The Lexmark 1000 sets a new price performance point for 600 dpi printing. With its small size, great print quality and attractive price point, the Lexmark 1000 is a natural choice for that second PC in the home, or for back to school where small space requirements and tight budgets are often the norm."

And Lexmark's new "Prebate" cartridge marketing program is aimed at increasing customer loyalty for name-brand Lexmark supplies. A "Prebate" cartridge for Optra S printers is offered for a significant discount (about $40) on the condition that the user agree to a single-use licence, which forbids any "resale, reuse, refill or remanufacture" of the cartridge. This licence, if adhered to, would effectively restrict the availability of used cartridges to refillers, who typically provide off-brand, remanufactured laser printer and inkjet cartridges for a fraction of the price of name brand supplies.

For more information, contact http://www.lexmark.com or (905) 477-2311. CCW

Cisco Canada has named new channels manager

Cisco Systems Canada Ltd has appointed Brent Rebus to national manager, Canadian channel operations. He is responsible for relationships with value-added dealers, systems integrators and VARs and is also expected to develop and expand Cisco Systems Canada's channel strategy.

Brent Rebus

Rebus first joined Cisco in 1994 as regional manager, capital region. His 10 years of industry experience include a variety of sales and management positions at IBM Canada Ltd.

Informix announces CEO

Informix Corp. has appointed Robert Finocchio Jr. as president and CEO. He will also join the board of directors for that database technology company.

Robert Finocchio

Most recently, Finocchio was president of 3Com Systems, a company that grew from US$419 million in 1990 to more than US$3.1 billion in 1997. He managed 10 divisions and 4,000 employees.

SCO appoints senior VP

Santa Cruz Organization has announced that David McCrabb has been appointed senior vice-president, market planning. McCrabb, a 25-year veteran of the IT industry, was formerly SCO's vice-president of marketing and channel sales. He will assume responsibility for "the vision and implementation of SCO's worldwide market and business development," reporting directly to Alok Mohan, SCO's president and CEO.

PeopleSoft has new VP

PeopleSoft Inc., a vendor of enterprise application software, has announced John Stammen as vice-president and general manager a separate division to provide business software products and services that address the specific needs of medium-sized organizations.

John Stammen has 17 years of experience in the software business, and joined PeopleSoft in 1994 as vice-president and general manager of the midwest region.

PhotoDisc gets new exec

(NB) — PhotoDisc Inc., a provider of digital photography to creative professionals, has promoted Tom Hughes to vice-chairman of the board and managing director of international operations.

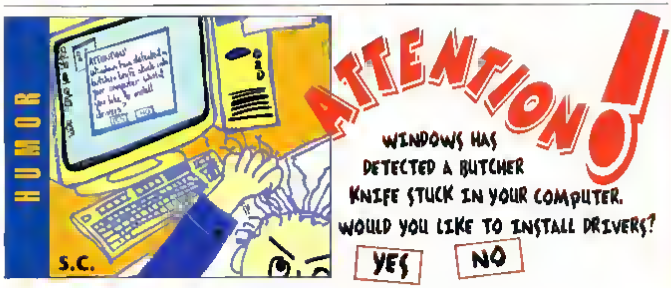
Hughes, who was one of the co-founders of PhotoDisc, will be responsible for developing strategic plans and relationships, increasing PhotoDisc's market presence abroad, and providing strategic direction to the development of new products, says the company.

Hughes will also oversee international sales and marketing efforts outside of the U.S.

Appie searches for new CEO

Apple Computer Inc.'s board of directors has retained Heidrick & Struggles Inc., a global executive search firm specialized in CEO assignments, to assist it in its search for a new CEO.

Apple says the firm will seek a world-class technology industry executive, "both a strong leader and a hands-on manager, with a successful sales and marketing background, an established industry knowledge and reputation, and the ability to create, execute and inspire."



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The Event of the Century?

by Douglas Alder

"Apple Computer should become Apple Software Inc. — a much reduced, but hopefully highly profitable company."

I attended MacWorld Expo recently in Boston, where Steve Jobs revealed Microsoft would be investing in up to five per cent of Apple stock.

Channel Problems

While most pundits are blaming bad marketing by Apple for the company's decline over the past 10 years, I put the blame for Apple's misfortunes squarely on channel problems. Early on, Apple awarded lucrative franchises in key markets to a small set of dealers. Apple allowed no competition. When competition did sneak in, in the form of grey market goods bought from overstocked U.S. Computerlands, Apple was quick to stomp on it.

I watched this close up in Vancouver with the traditional Apple Authorized Dealers. They were able to turn their noses up at the retail market, because of their real money-makers — their education contracts and a number of key corporate accounts.

Mac Market Sagged

The result however, was that Macintosh market-share continued to slip. Apple knew it had to do something, but every time the company suggested changes, these were protested heavily by this relatively complacent group of dealers. Things changed, but too slowly.

First, Apple allowed in the big box retailers like Future Shop and Computer City. Then they went into very broad distribution, selling through EMJ Data Systems Ltd. The traditional Apple dealers still got a few perks, but these were in rapid decline.

Good Growth Potential

Despite all Apple's corporate problems, I believe if the company leaves the clone market alone, and in fact allows it to expand, the Macintosh line stands a good chance of surviving as a worthy competitor to Windows. The RISC versus CISC chip argument is finally starting to bear fruit. Intel has no challenger to the heart of the PowerMacs — Motorola's new 750 PowerPC chip. Last I counted, the PowerPC had been in the speed lead for about a year now. The 750 started shipping this month.

In the last two years, things have changed radically in the reseller sector. Education purchases of Macs are on the decline; most of the old corporate strongholds are throwing away their aging Macs and standardizing on low cost, high-powered Pentiums.

With the coming of the clones, there is much more Macintosh activity in Vancouver. Byte Computers, a long-time Apple-only dealer has filed for bankruptcy. Advantage Computers, another one of the old guard has moved out of its corporate offices and has taken a position on Broadway's active retail corridor. Young, aggressive dealers like Vertigo Research and Mac Station are entering the market with clone Macintoshes. Even some formerly PC-only dealers like Compu2000 and Discount Software Club have jumped in with a good Mac selection in their ad listings. Computer Buyer's Warehouse Direct is doing national mail order for clone Macs. Apple may be having problems, but I have never seen the Mac market look so healthy.

Douglas Alder for CEO of Apple

I would like to humbly submit my name to Steve Jobs for the post of Apple CEO. (Not seriously, my wife would stop talking to me. Also, there may be a few small gaps in my resume, like no experience running billion-dollar companies.)

But here's what I think the company should do. I believe that Apple needs to get out of the hardware business. For the longest time, I could not see the logic of it, but seeing the hassles Apple has had with the cloning dilemma in recent months, it finally clicked. These issues will simply not go away, while there is still a link between Apple's hardware and software business. I think Apple should spin the manufacture of its hardware off, in the same way that it spun out the Newton division.

Apple Computer should become Apple Software Inc. — a much reduced, but hopefully highly profitable company. The hardware division should become its own company, something like Macintosh Computers Inc. These guys would have to hustle to return to their former glory. The company would never get 30 per cent margins back, but it would have a good brand name and some hot products to ship.

This company would have links to Apple just as Apple did with Claris a few years back, but there would be a division of church and state, monitored closely by the new, largely outside-Apple board of directors. Claris is making a fair bit of its money developing PC products these days. Claris has a stable of great products and it is a model cross-platform developer. Mac and PC products usually ship the same day.

Apple Software Inc. should make all product information equally available to all cloning partners. Macintosh Computer Inc. would be just one of many. Then Apple should drop the gloves and let every clone vendor from Taiwan to Ireland make its own motherboards and machines. This clone market would be as rough and tumble as the PC market has ever been. Margins for manufacturers will be thinner no doubt, but the products will be competitive and available in retail everywhere. In this, I see the survival of a great alternative to Microsoft and Windows. I wish Apple luck. CCW

Douglas Alder is publisher of Canadian Computer Wholesaler. He can be reached at publisher@tcp.ca

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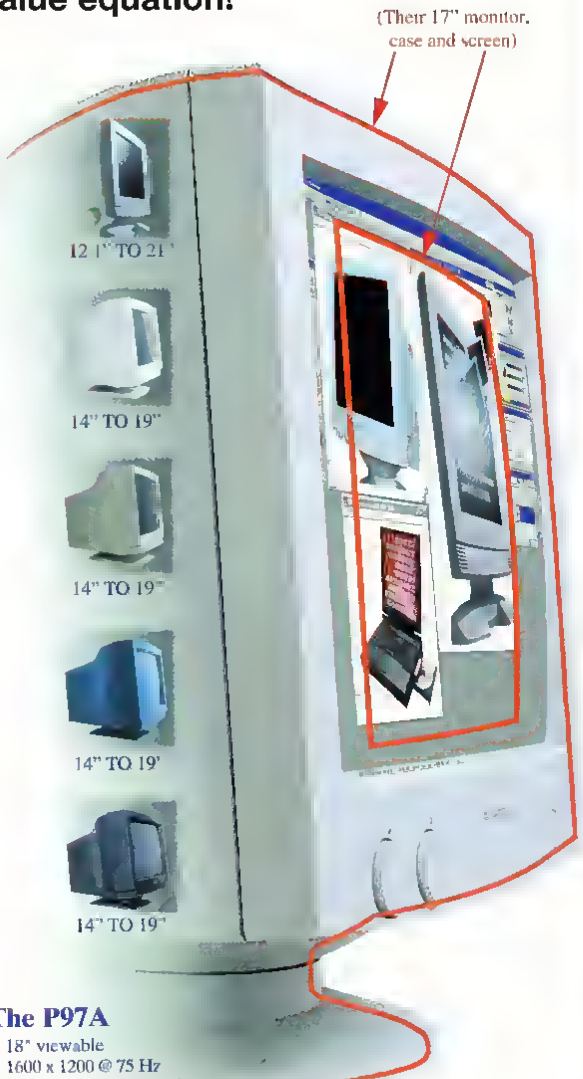

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